



# *Fito Florm*<sup>®</sup>

...PLANT NATURALLY DESERVES IT

20  
21

# PACKAGE DEALS 2021

## GRAIN PACKAGE:

FitoHorm Grain 20 L + FitoHorm Turbo Sulfur 20 L (7 ha / package)



## RAPE PACKAGE:

Polyboron 140 20 L + FitoHorm Turbo Sulfur 20 L (7ha / package)



## CORN PACKAGE:

FitoHorm Turbo Nitrogen 100 L + FitoHorm Turbo Zinc 20 L (10 ha / package)



## SUNFLOWER PACKAGE:

Polyboron Plus 20 L + FitoHorm Turbo Potassium 20 L (10 ha / package)





# DEAR VISITOR,

-Thank you for your interest in Fitohorm KFT's premium quality products.

In the difficult times of the Covid-19 crisis, we hope that you have been able to take care of both your loved ones and your colleagues and in terms of trade, you were able to enter into new business opportunities.

Overcoming some challenges at Fitohorm KFT, we managed to achieve a year beyond expectations. This is due to close cooperation with our customers, our special chelating agent (EDDHSA), domestic production, fast logistics, and all the professional 40 years we have represented in the field of real solution foliar fertilizers in Hungary and in the neighboring countries!

In the past year, in order to increase our competitiveness, we managed to implement further modernizations at our site in terms of logistics and warehousing, (the road network within the site has received a new layer of asphalt), as well as the development of the production line / with the commissioning of a new bottle blowing machine /.

We are constantly developing and modernizing our product range to fit into today's modern agricultural technologies.

Nothing proves this more than the fact that the products of the Fitohorm Turbo product family are very decisive players in the Hungarian foliar fertilizer market.

By using our products, farmers can achieve high-yield, premium-quality crops.

This year's novelties were born in the spirit of environmental awareness. In order to reduce the excessive use of fertilizers and nitrate leaching, Nitrogen inhibitors have been added to the product range of Fitohorm KFT.

One is **Urease Inhibitors**, which help the slow decomposition of solid urea in the soil, and the other is **Nitrification Inhibitors**, which delay the conversion of ammonium nitrogen to nitrate.

By using these materials, we can greatly reduce evaporation and leaching, and provide a more even supply of nutrients to our plants.

Our third new product is a microelemental seed fertilizer named **Fitohorm MagMAX**. It also includes in its name that it contains the highest possible percentage of micronutrients to help germination. In addition to the high content, the product also has a very pronounced coloring effect (red).

Last but not least, with this professional product catalogue we would like to provide information on the correct selection of foliar fertilizers and their professional using.

We hope that the foliar fertilizers of Fitohorm will also contribute to the success of farming. We would like to wish you good health and a successful financial year on behalf of all the employees of Fitohorm KFT.

Sincerely



**ATTILA SZABÓ**  
Executive Director



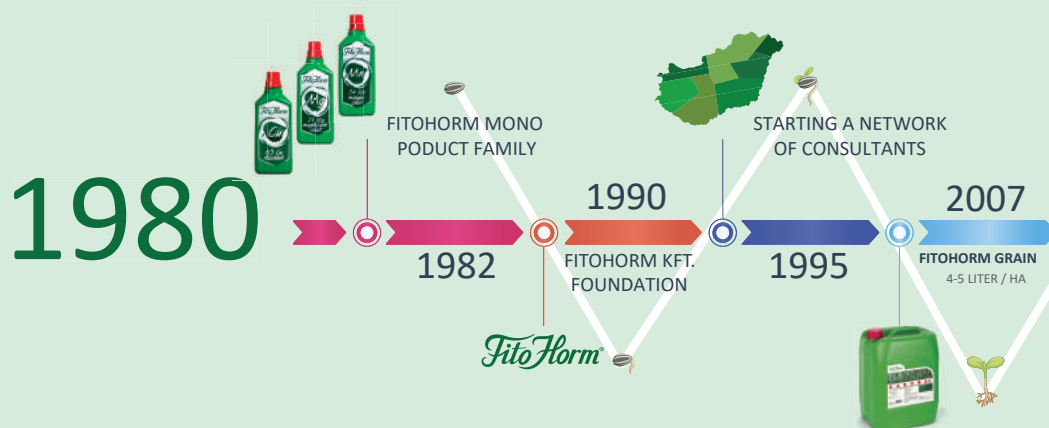
**DUSZÁN FORRAI**  
Company manager

# FITOHORM - 40 YEARS

## PLANT NATURALLY DESERVES IT

In the mid-1970s, Hungarian experts and agronomists discovered after several experiments that the replacement of micro-nutrients on foliage was much more efficient and faster than through the soil. The Bácska Mg. Tsz. was also involved in the experiments. In the early 1980s, management decided that foliar nutrition was an indispensable element of crop production technology and initiated the production of the FitoHorm mono product line. The work of well-educated agrarian and chemical experts - a prominent figure of the group was Professor Endre Körös former head of the chemistry department of ELTE - was crowned with success, as the invention became a patent. The novelty of this is a special chelating agent that can keep metals in a stable shape and

they are also easy to record. The positive effects of the FitoHorm product family on plants have also been demonstrated during the multi-year trial and authorization process for the participating farmers. After the change of the political system, the former agrarian colleague Márton Szabó, a former consultant and agronomist, did not let the foliar fertilizer business to close down. He believed that in spite of political changes in agriculture, nutrient supply would continue to be needed, so in 1990 he formed the FitoHorm KFT. Thanks to Mr. Szabó's humble work and continuous development, the KFT has been expanding year by year..



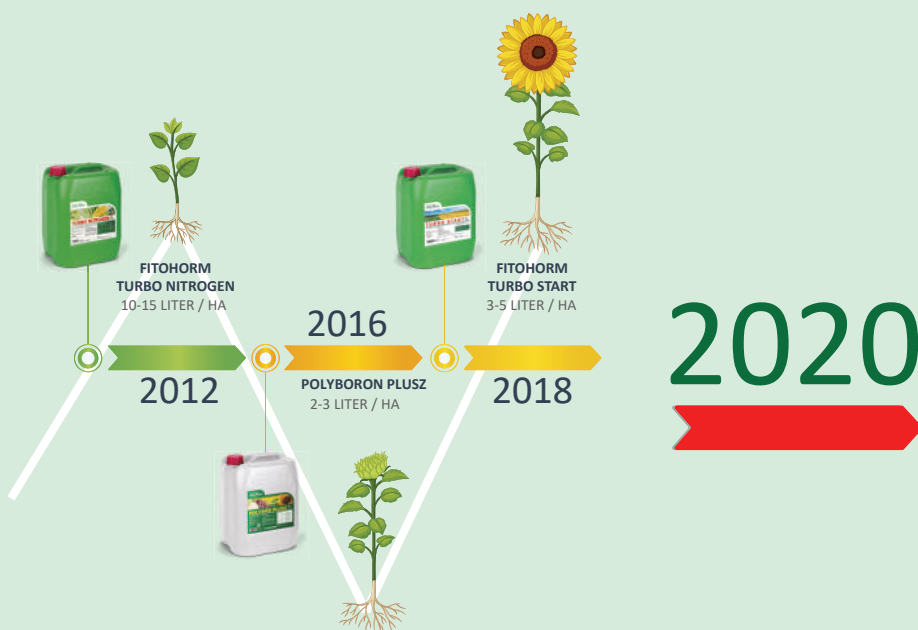


## A reliable Partner

FitoHorm products are manufactured at our Baja site under the guidance of experienced chemical experts. In addition to excellent quality, well-organized, flexible logistics solutions (prompt and punctual delivery) also serve our customers' satisfaction. At FitoHorm KFT, we not only focus on product quality, but also on providing our clients with accurate, up-to-date information and advice. Our products can be purchased and used professionally by our professionally trained and experienced consultants. Among the values represented by FitoHorm KFT is stability and reliability. The foundation of our efforts in the early eighties - quality, reliability, permanence - has been proven by the operation of our company for 40 years.

## In competition, we can still stand

In crop production, varieties with exceptional fertility have emerged, and the success of micro-nutrient replacement via leaf is of increasing importance. These varieties are also very responsive to our foliar fertilizers. Of course, products are constantly being developed and modernized to meet current requirements and needs. As a result, among the many similar products on the domestic market in recent decades, FitoHorm products continue to hold their place and their plant physiological effect is far superior to that of most competing manufacturers.



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# SMALL BOOK





# ABOUT FOLIAR FERTILIZERS

## CHELATIZED MICRO-ELEMENT FERTILIZER AND THE FITOHORM!

FITOHORM KFT is committed to chelated, true solution foliar fertilizers, based on licensing experiments 38 years ago and in the light of practical experience to date.

Chelates are metal complexes of special structure, with ligands surrounding the metal ion in a "chelate" (Greek "chelate") and thus forming stable metal ring complexes. Because of their water solubility and stability, metal chelates can be used as both spray and soil fertilizers. The use of chelated micronutrient foliar fertilizers allows for a more even distribution of nutrients, which in itself provide good adhesion and therefore better utilization as these formulations penetrate the waxy cuticle of the leaves more easily and quickly..

### DISPERSE SYSTEMS:

The **pure salts**, due to their unformulated nature, have inadequate foliar efficacy.

An **emulsion** is a colloid in which particles of a liquid are dispersed in another insoluble liquid. As these products are referred to as a kind of physical solution, it is difficult and slow to take up the active ingredient.

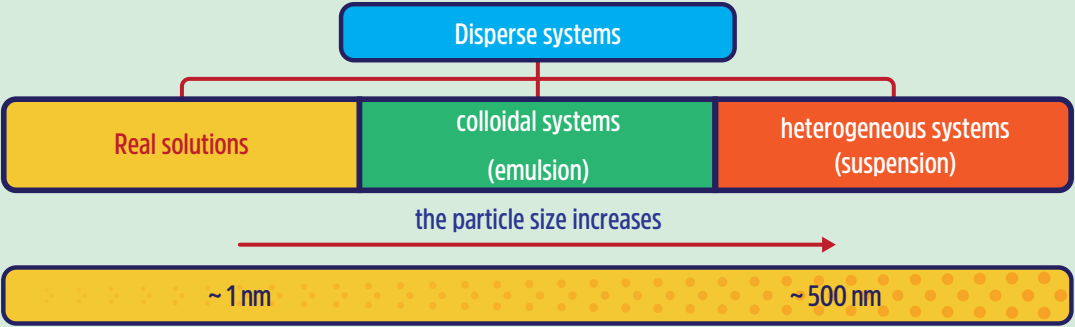
The **suspension** is a mixture in which there is no dissolution of the components. Most commonly, a mixture of solid particles suspended in a liquid is referred to as a suspension. After some time, the heavier components settle on the bottom of the vessel (gravity separation; settling). Usually a group of particles larger than 500 nanometers distributed in a liquid. Often unstable, their mixability and application time are significantly more critical. Floating solids particles are much more difficult to penetrate into plants due to their size, so they have a much lower efficiency than true solution foliar fertilizers.

Az **solution** is a multi-component system (mixture) in which one component is usually present in greater amounts (solvent) than the other components (solute).

The **Real solutions** can be classified as homogeneous dispersion systems. Among the components, the solvent (continuous medium) was highlighted, the rest being the dissolved (dispersed) material. In real solutions, the particles have a particle size of 0.1-1 nm.

The nutrient requirement of a rapidly developing stock often exceeds the nutrient uptake capacity of the roots. In case of unfavorable soil conditions (compaction, sludge, drought, etc.) or extreme weather conditions (drought, too cold weather, leaching losses, etc.), nutrient uptake becomes inhibited. In these cases, well-applied foliar fertilization is an effective aid to the stock, as the necessary nutrients can be quickly and purposefully introduced into the plants. The most effective means of this is chelating agents. Chelated leaf fertilizers are widely used to improve the nutritional status of micronutrient deficient populations.

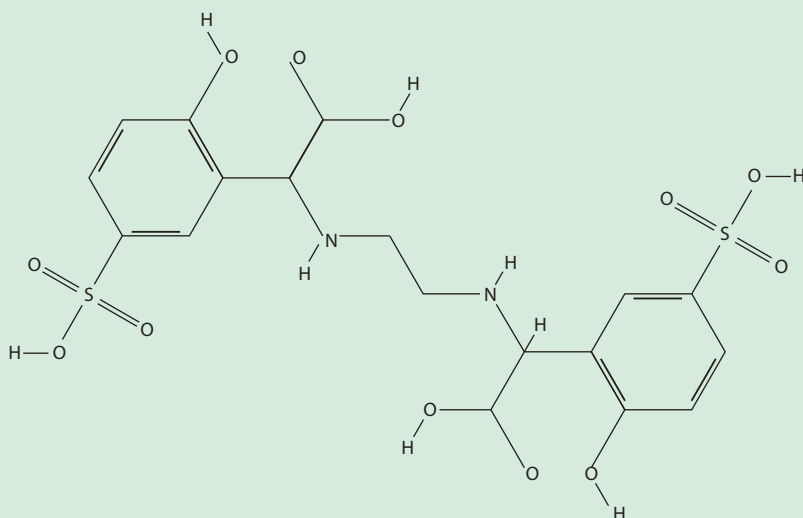
Advice based on soil and leaf studies, which FitoHorm KFT has been using successfully since 1980, facilitates the correct selection of trace elements. We also encourage our new partners to carry out these tests prior to a reasonable nutrient supply.



the particles	real solutions	colloidal systems	heterogeneous systems (suspension)
size	0,1-1 nm	1-500 nm	500 nm
visibility	invisible	with ultra and electron microscope	with light microscope
deposition	don't settle	don't settle	willingly takes place
filterability on a paper filter	no filterable	no filterable	filterable
example	sugar solution	sugar solution	plant protection solution with elemental sulfur

Chelated formulations can be stored in solution for a much longer period of time without the risk of precipitation, and are more problematic when co-applied with pesticides. The use of chelated micronutrient foliar fertilizers allows for a more even application of nutrients, which in themselves provide good adhesion and therefore better utilization as these formulations penetrate the waxy cuticle of the leaves more easily and quickly. Chelates can also be ranked based on different parameters. The best known of these is EDTA (**ethylenediamine tetraacetate**), the most modern and the most environmentally friendly is EDDHSA (**ethylene diamine-N, N'-bis [(2-hydroxy-5-sulfo) ferric acetate]**). Fitohorm KFT foliar fertilizers are chelated with EDDHSA chelator, which has Reach registration.

(EDDHSA: Unique Micronutrient Enhancement Formula is an organic chelating molecule. With its amino acid formula, it brings microelements into the form most easily absorbed by the plant. Numerous plant experiments have proven its effectiveness. It does not have the disadvantage of EDTA.)



	PH stability (>7)	efficiency of absorption	duration of effect
EDTA	•	•	•
STPA	• •	• •	• •
EDDHMA	• • •	• • •	• •
EDDMA	• • •	• • •	• • •
EDDHSA	• • • •	• • • •	• • • •



# FITOHORM SMALL BOOK

## WHAT, WHEN, WHAT TO USE IT FOR?

### > Seed treatment (dressing)

#### Why use FitoHorm dressing material?

- » Because it provides the necessary nutrients for the germinating seeds - until the root and foliage of the seedling is formed,
- » Because it improves the germination power and percentage of seeds with lower germination capacity (older items),
- » Because it accelerates the growth of plants and thus ensures uniform emergence,
- » Because it allows the plant to excel in rooting: faster access to deeper, nutrient-rich layers of soil - and more efficient nutrient uptake from these layers,
- » Because it increases the resistance of the plant to adverse environmental conditions at germination (drought, inland water, cold).

#### OUR PRODUCT RECOMMENDED FOR SEED DRESSING:

- » MikroMax (2-3 liter/seed ton)
- » FitoHorm MagMAX (4-5 liters/ton of seed)



### > ROOTING

Occasionally, the rate of growth is even unsatisfactory, even with a higher root mass, because the root system is unable to absorb sufficient nutrients due to its rapid development. It is more common that nutrient uptake is inhibited for some environmental reason (eg drought). It is important for the nutrient uptake to have the root as early and as large as possible, since only plants with a strong root can withstand environmental stress and can subsequently produce high yields. Root cultivation requires a lot of energy and its production and transport must be accelerated. For this, it is important to create the largest possible root mass.

#### OUR RECOMMENDED PRODUCTS FOR ROOTING:

##### Primary effect:

- » FitoHorm Turbo Magnesium
- » FitoHorm 30 P
- » FitoHorm Turbo Start

##### Secondary effect:

- » FitoHorm Turbo Phosphorus
- » FitoHorm Turbo Macro

## ➤ Growth-incentive (green weight increasing)

It is extremely important to know the agrotechnical optimum of each plant, and in particular the specific nutrient requirements of the varieties / hybrids, which ensure the optimum yield and maximum yield under specific ecological conditions. Without the right amount of green mass, plants cannot be expected to produce high yields.

### OUR RECOMMENDED PRODUCTS FOR QUALITY IMPROVEMENT AND MATURITY ACCELERATION: Our primary effect products:

- » FitoHorm Turbo Nitrogen
- » FitoHorm 14 N
- » FitoHorm Complex Plus

### Our secondary effect products :

- » FitoHorm Turbo Sulfur



## ➤ Stimulation of crop fixation

The basis of our yields is the sum of the bound fruits. Unfortunately, the ideal circumstance is very rare during the harvesting season, so stimulating it is of utmost importance in Hungary. There are two ways we can promote FitoHorm products at the same time:

1. Stimulate pollen production to increase pollen production. This will increase the likelihood of the stigma getting into pollen.
2. Another method is to increase the stamina's capacity to stay wet for longer, to adhere to the pollen, and to provide enough power to shoot the pollen tube.

### OUR RECOMMENDED PRODUCTS:

- » Polyboron 140
- » Polyboron Plus
- » FitoHorm 10 B



## ➤ Maturation acceleration, quality improvement

There are several reasons for accelerating the maturation process: unfavorable environmental conditions, market, work organization or extremes (gluten, color, sugar level, etc.). Each is a strong argument for using a maturation accelerator!

### OUR RECOMMENDED PRODUCTS FOR QUALITY IMPROVEMENT AND MATURITY ACCELERATION:

- » FitoHorm Turbo Phosphorus
- » FitoHorm Turbo Potassium
- » FitoHorm Complex Plus Agro
- » FitoHorm 39 K



## ➤ Our products that can be mixed with liquid UAN solutions:

The use of UAN solutions (Nitrosol, Nikrol, etc.) as head fertilizers is a very widespread method in our country in early spring. Its utilization through the foliage and its scorch-free application, in all cases, depends on the chemical form and weather conditions. Thanks to the combined effect, our micronutrient foliar fertilizers, which can be applied in one pass with various UAN solutions, are utilized and activated even faster in the plant. In our products, the active ingredients and the chelating molecule are mixed both physically and chemically without any damage. Thanks to their mixability, they allow targeted micronutrient replacement at no additional cost.

### OUR RECOMMENDED PRODUCTS FOR MIXING (1-2% ACTIVITY):

- » FitoHorm Bio Grain
- » MikroMax
- » FitoHorm Turbo Sulfur
- » FitoHorm Turbo Magnesium
- » FitoHorm Turbo Copper
- » FitoHorm Turbo Zinc
- » FitoHorm Turbo Potassium
- » Polyboron 140
- » Polyboron Plus
- » FitoHorm Turbo Start



# DEFICIENCY SYMPTOMS

## > Nitrogen deficiency (N)

**Dwarf growth:** Due to the lack of N, the growth of the plant is inhibited and therefore unable to reach the ideal size. The inhibitory effect is exerted by longitud

N-deficiency is characterized by „**stiffness**“, which is manifested on the stem and leaves.

Nitrogen deficiency always first shows signs of **yellowing and necrosis on older leaves and plant parts** while the younger parts of the plant retain their green color for a long time. Symptoms of N-deficiency differ from other deficiency **diseases in that the reddish tones on the leaves always accompany the lighter green or yellow color of the whole plant.**

In case of N-deficiency use **FitoHorm 14 N nitrogen** solution or **FitoHorm Turbo Nitrogen** foliar fertilizer.



## > Phosphorus deficiency (P)

**Symptoms of P deficiency** are less characteristic than other deficiencies. In many cases, the affected plant may give the appearance of N-malnutrition or optimal nutrient supply. Anthocyanin formation associated with P deficiency may result in reddish, purple, or dark purple discoloration. In cereals, this can occur mainly on the leaf pod and stalk, in the corn itself on the leaf, while on other plants it can occur on the back or possibly on both sides of the older leaves.

Symptoms often **first appear only on older leaves**. The plant produces only tiny, mostly deformed flowers. P-deficiency reduces the quality of cereals in the bakery industry and prevents the starch fro

In the case of P deficiency use **FitoHorm 30 P**, **FitoHorm Turbo Phosphorus** **FitoHorm Turbo Macro** or **FitoHorm Turbo Start** fertilizer.



# DEFICIENCY SYMPTOMS

## > Potassium deficiency (K)



Insufficient K supply can be recognized even before the appearance of obvious symptoms of deficiency. **K-deficient plants**, due to disturbances in the turgor regulation and stomach mechanism, **lose sleep faster** in dry, warm, sunny days than well-potassium-rich plants.

K-deficiency begins with yellowing on the older, lower leaves, beginning at the apex of the leaves, and later the **tissue between the leaves becomes dry**. In monocotyledons, K-deficiency symptoms always start at the apex of the leaves and spread most rapidly along the edges towards the leaf base.

The K-deficiency **results in reduced plant resistance to disease, drought and cold tolerance and deterioration in fruit coloring**. In case of K-deficiency use **FitoHorm 39 K** potassium solution or **FitoHorm Turbo Potassium** fertilizer.

## > Magnesium deficiency (Mg)



Characteristic symptoms of **Mg deficiency**, first of all on the older leaves, stem from the destruction of chlorophyll. Deficiency symptoms can also begin on the younger leaves if the plant grows very fast and the magnesium is not transported sufficiently from the older leaves..

In grasses and cereals, due to local chlorophyll accumulation, older leaves, along the veins, exhibit a **bead-like marble appearance** while the rest of the leaf retains its green color. Keeping the letter light, this phenomenon is particularly visible. Later, pale green or yellowish green chloroses occur. The yellowing extends from the apex and the margin of the leaf to the base of the leaf.

In case of Mg deficiency use **FitoHorm 24 Mg magnesium** solution or **FitoHorm Turbo Magnesium** foliar fertilizer.

# DEFICIENCY SYMPTOMS

## > Sulfur deficiency (S)

Sulfur deficiency, like **nitrogen deficiency**, appears as a **yellowish-green or markedly yellow color**, which makes it difficult in many cases to distinguish the deficiency symptoms of the two elements..

The obvious difference between sulfur and nitrogen deficiency is that **the former usually first appears on the youngest leaves**. In this case, older leaves do not die as with nitrogen deficiency. Sulfur-deficient **plants are lower than normal**, and when deficient, they grow stubbornly, as do nitrogen-deficient plants. The **leaves are smaller**, often **narrower**. In the case of a deficiency of sulfur, protein production deteriorates, along with the baking industry parameter, and the oil content of the oil plants decreases.

In case of S-deficiency use **FitoHorm Turbo Sulfur** or **FitoHorm Turbo Potassium** foliar fertilizer.



## > Boron deficiency (B)

Boron deficiency always occurs on the youngest leaves and on the tops of the shoots and roots. **Boron deficiency manifests itself in a variety of visually detectable morphological changes, such as**

- » Chlorotic discoloration of the youngest rosette leaves;
- » Shorter flavors;
- » Terminal bud and shoot death;
- » Leaf stalk, stem paralysis and run-up;
- » Less flower and seed training combined with kicking of seed boxes;
- » Inhibited root growth with abnormal root formation abnormally;
- » Brown blotch, vitrification, dry rot, loose tissue, often with cavities in the fruit, carrot, torso, especially near the bundles and conveying tissues.

In case of B-deficiency use **FitoHorm 10 B** boron solution, **Polyboron 140** or **Polyboron Plus** foliar fertilizer.





# DEFICIENCY SYMPTOMS

## > Calcium deficiency (Ca)



Ca-deficiency is strongly correlated with the functions of calcium in the plant. Symptoms first appear on the youngest and most diffusing organs, so the growth of the plants is inhibited and their bushiness is bushy. **The youngest leaves, which are primarily affected, are usually smaller, deformed, and their tips and edges curl in a spoon.** The edge of the leaf is irregular. Starting from the edges and especially from the apex, spreading to the intervertebral fields, there is chlorotic scab and **coherent chloroses**, which produce brown, necrotic, over time patches. Occasionally, the leaf disc may also develop necrosis. It is characteristic of Ca-deficiency that the color of the vessels, even on fully necrotized leaves, is always **darker than that of the intercostal fields.**

In the case of poor Ca supply, the otherwise normally developing plant may have a sudden onset of so-called. **"Softening of the stalk"** or **"fracture of the stalk"**.

## LACK OF CALCIUM CAN CAUSE MANY OTHER SYMPTOMS AS EXAMPLES:

- » Cereals often have only frivolous eyes
- » In spring intensive growth of rape , rape stems and cracks not caused mainly by the cold,
- » Common beans, locusts, mustard and alfalfa often kick their flowers,
- » With peppers "Sunburn", a dry dead crop of fruit,
- » Melons and tomatoes show" peak "and" flower peak rot ", especially at high temperatures,
- » On the lettuce there is a tan.

For Ca deficiency use **FitoHorm 40 Ca calcium** solution or **FitoHorm Turbo Calcium** foliar fertilizer.

# DEFICIENCY SYMPTOMS

## > Copper deficiency (Cu)

The occurrence of copper deficiency can fluctuate significantly from year to year, depending on the weather conditions at the same site. In drier years, copper deficiency is more common in the early stages of juvenile development. **Copper deficiency is very difficult to detect with the eyes.** Symptoms usually **first appear on the leaf, still on very active metabolic leaves and organs.** Copper deficient plants often produce higher vegetative masses, but severe disturbances occur during the generative developmental phase. Mostly fruit trees are characterized by an increased grafting of side buds. In the case of copper deficiency, the herbaceous species may exhibit sustained wilting, the formation of "flaccid" tactile leaves, **leaf blemishes**, or **leaf deflection**.

In case of Cu deficiency use **FitoHorm 63 Cu** Copper Solution or **FitoHorm Turbo** Copper Fertilizer.



## > Iron deficiency (Fe)

**Iron deficiency** is still the most difficult remedy for deficiency disease, which can cause significant damage and loss of yield to certain crops and certain soils. At a slight deficiency, **the youngest leaves of the plant lighten to yellowish-green.** As the deficiency increases, the interstitial fields become yellow to orange or orange. The discoloration is manifested on the youngest leaves, in the form of a chlorotic stripe covering the entire leaf. The younger the leaf, the more intense the symptoms of specific chlorosis appear. **In the case of a very severe deficiency, the youngest leaf emerging is yellowish-white or almost white,** or only green at the base of the leaf, contrasting sharply with the other leaves.

In case of Fe deficiency use iron solution **FitoHorm 55 Fe** or **FITO-FERR T-3.**



# DEFICIENCY SYMPTOMS

## > Manganese deficiency (Mn)



Chlorophyll is degraded in manganese deficient cells. As a result, the cells lose their green color and small, yellowish-green, tiny, punctate necrosis first develops in the smaller blood vessels, initially confined to areas farther from the blood vessels and exhibiting light spots in the incident light. The spots will turn yellowish white.



In the case of persistent deficiency, the flesh of the leaves also becomes chlorotic, leaving only a narrow green border around the vein at the base of the leaf. Symptoms of manganese deficiency are most often found on leaves of younger or middle age, and are most pronounced on leaves closer to the base. At high levels of growth inhibition due to manganese deficiency, **reduced flower and fruit production, weak leaf and root growth** can also be observed.

For Mn deficiency use **FitoHorm 54 Mn Manganese Solution** or **FitoHorm Turbo Manganese Fertilizer**.

## > Zinc deficiency (Zn)



**Zinc deficiency** develops in plants in different ways, which can be:

- » Small leaf
- » Rosette
- » Chlorotic congestion due to patchy chlorosis in the intervertebral fields, which gives the leaves a mosaic appearance.



Since zinc plays an important role in auxin metabolism, the deficiency symptoms are also due to auxin deficiency. Thus, the leafy foliage, coupled with smaller or larger leaf deformation, and the growth inhibition coupled with rosette formation due to shorter flavours, are considered to be typical symptoms of zinc deficiency. In maize, in the case of a deficiency of zinc, the development of fertilization disorders is very noticeable, which is often accompanied by the formation of small deformed grains.

For Zn deficiency, use **FitoHorm 65 Zn Zinc Solution** or **FitoHorm Turbo Zinc Fertilizer**.

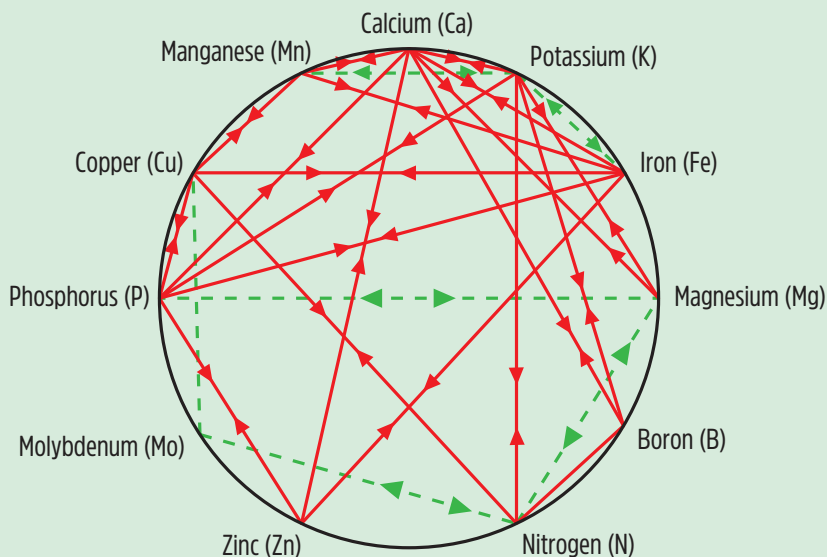
## NUTRIENT INTERACTION

### Antagonist

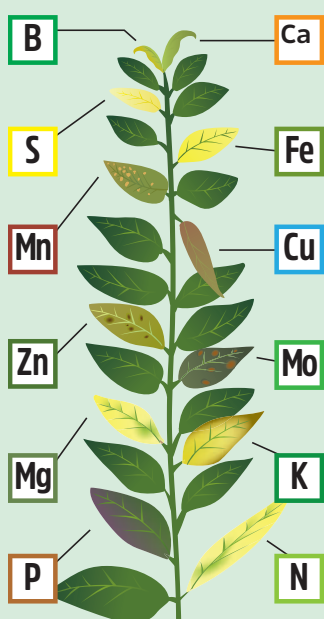
The predominance of one element suppresses the inclusion of another low concentration element.

### Synergist

Positive interaction when one element helps to incorporate another element.



## RECOGNITION OF DEFICIENCY SYMPTOMS



### Visual deficiency symptom

#### On old leaf

Fading leaves, yellowing **N - def**

Purple, magenta **P - def**

Blade necrosis **K - def**

Yellowing between leaf veins **Mb - def**

#### On young leaf

Yellowing **S - def**

Leaf bend, distortion **B - and Ca - def**

Yellowing between leaf vein **Fe - def**

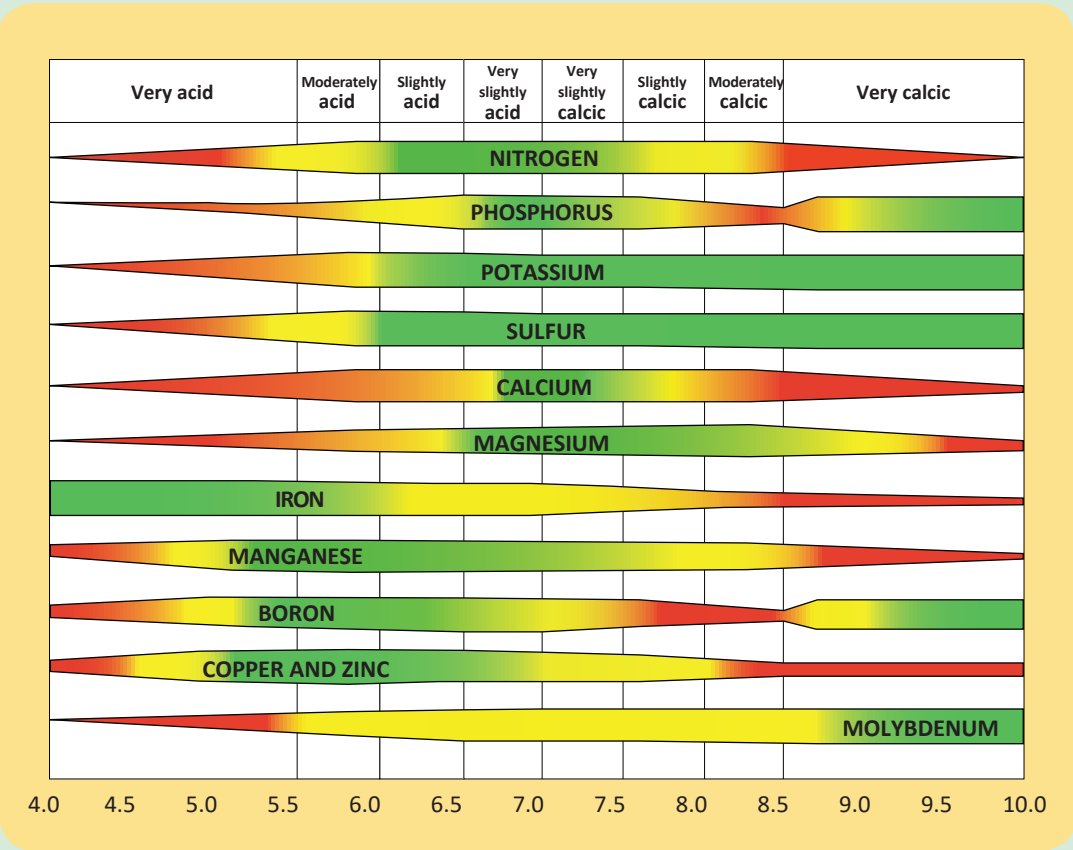
Leaf blotching, perforation **Mn - def**

Small, stiff leaf **Zn - def**

Curled brown leaf **Cu - def**

# NUTRITIONAL CAPACITY ON THE SOIL PH FUNCTION

The diagram shows that as the pH increases, the uptake of many trace elements in the soil is greatly reduced. This is especially true for iron and manganese. From the diagram you can see which nutrients are blocked by the host, so effective replenishment of these nutrients by foliar fertilization is essential.



## HOW EFFECTS SOIL PH ON NUTRIENT CONSUMPTION (PH FACTOR)

The pH of the growing medium is very important and is also the most misunderstood factor. The plant carries the elements in the water, so their water solubility is essential for immediate utilization. This is a function of pH.

The best pH for any medium is in the range of 5.4 to 6.0. Nutrient utilization is a function of pH. The width of the strips indicates the degree of utilization



# INHIBITORS

An added compound to nitrogen-based fertilizers whose role is to reduce fertilizer losses in plants. By prolonging the active time, the nitrogen component of the fertilizer remains in the soil (either urea-N or ammonium-N), so the inhibitor improves the efficiency of nitrogen utilization (NUE) and reduces environmental emissions.

There are two main types of nitrogen inhibitors:

1. **Urease inhibitors (UI)** that inhibit the urease enzyme on urea hydrolytic effect.
2. **Nitrification inhibitors (NIs)** that inhibit ammonium biological oxidation to nitrate.

## > Urease inhibitors (UI)

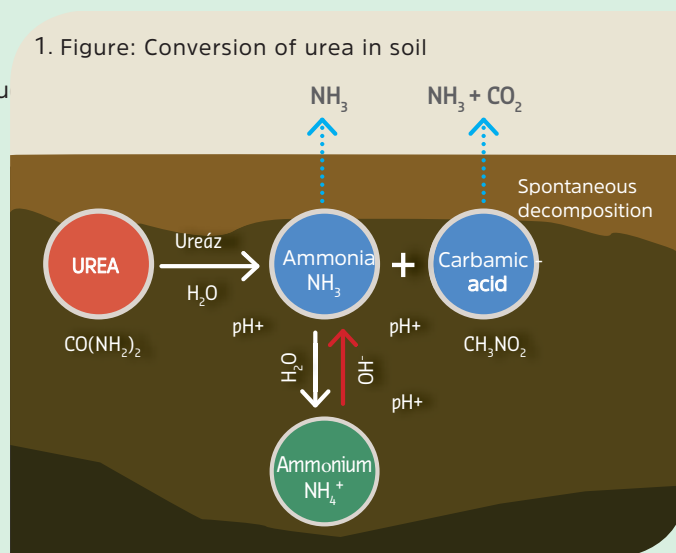
Urea fertilizer is difficult for plants to absorb. In order to be used as a nitrogen source, it must first be converted to ammonium ( $\text{NH}_4^+$ ) and nitrate ( $\text{NO}_3^-$ ).

In the soil, urease enzymes are responsible for the first step of the transformation. Urea is unstable in the presence of water, so the conversion process usually starts immediately, but not directly to ammonium. Urea is first converted to ammonia and carbamic acid, which decompose spontaneously to ammonia and carbon dioxide (Fig. 1).

The conversion rate of ammonium and the loss of ammonia depend on a number of factors:

- » the most important is soil, temperature and humidity
- » the amount of plant soil residue on the soil surface
- » the cation exchange capacity of the soil and the pH of the soil.

High ammonia losses tend to occur in light soils and tillage zones. Although up to 80% ammonia loss has been recorded in laboratory studies, an average of 24% (20% ammonia-N) ammonia loss by evaporation is assumed (EEA, 2013).



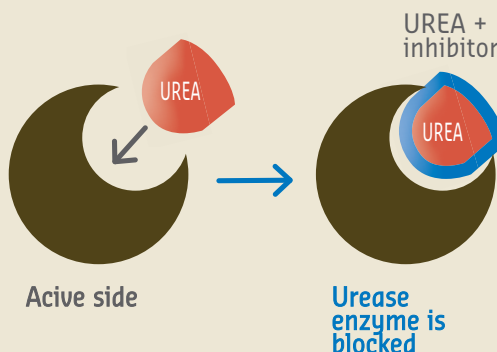


## Reduction of ammonia loss

One way to reduce ammonia loss is to treat urea-based fertilizers with urease inhibitors. This effectively delays their conversion to ammonia and carbamic acid by blocking the action of the urease enzyme for approximately two weeks (Figure 2).

Using the technology, ammonia losses can be reduced by an average of 70%.

2. Figure: OPERATION OF UREA INHIBITORS

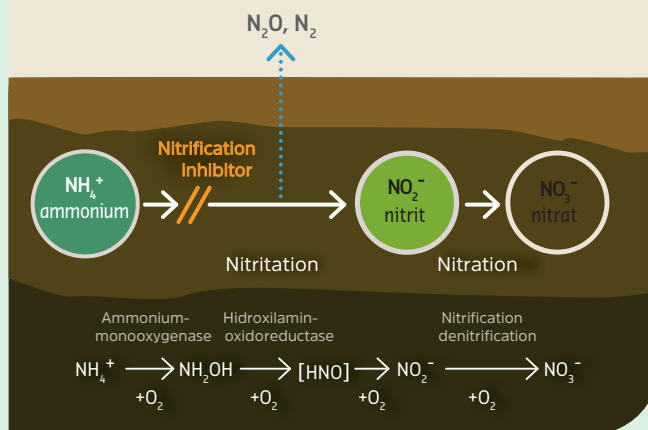


## > Nitrification inhibitors (NI)

Depending on the temperature, ammonium and ammonium nitrate fertilizers in urea are rapidly converted to nitrate by nitrification. The use of fertilizers that inhibit nitrification significantly reduces the risk of nitrate leaching.

The nitrification inhibitor delays the conversion of ammonium nitrogen in the soil to nitrate by temporarily suppressing the effect of *Nitrosomonas* ssp. the enzyme ammonium monooxygenase of soil bacteria, which is responsible for the first step of the nitrification process (conversion of ammonium to nitrite) (Figure 3).

3. Figure: NITRIFICATION OF SOIL AND FUNCTIONING OF NITRIFICATION OF INHIBITORS



The length of the nitrification time depends mainly on the ambient temperature. At low soil temperatures the period is quite long, while at higher temperatures it is relatively short.

In addition to nitrate, ammonium can also be a direct source of nitrogen for plants. However, unlike nitrate, it is poorly translocated into the rhizosphere, which prevents its rapid uptake. Nitrification inhibitors support the partial ammonium feeding of the plant.

# FITOHORM MAGMAX

## MICRO - ELEMENT COMPOSITION FOR COATING

A good start is important in all areas of life, and this is exponentially true for the early stages of our cultivated cultures. If you think about it, all the negative effects that lurk on a young plant can be greatly reduced if germination, rising and the subsequent juvenile life stage take place quickly, explosively, in proper condition. Homogeneous, vitally emerging vegetation fights weed competition more effectively, grows out of the "mouth" of pests sooner, and, thanks to its strong roots, provides a basis for further development that can be the key to survival in a later stressful period.



FitoHorm's product range has so far not included a microelement formulation specifically intended for dressing, however, our seed treatment experiments with microelements in recent years have drawn attention to the benefits and necessity of this type of formulation.

The following microelements in the product help the initial / germination of the plant:

### > Zinc (Zn)

- » both specific and non-specific activators of enzymes
- » **multiplies the elongation of the primary root hairs**
- » an activator of the synthesis of auxin as a growth hormone in association with manganese.

### > Manganese (Mn)

- » enzyme (Peptidase, Prolidase Glutamyl transferase, Enolase,) affects cellular respiration, i.e. ensuring the smooth flow of carbohydrates,
- » **linked to zinc affects the formation of auxin, it helps the elongation of both root formulas and shoot initiation formulas to be faster.**

### > Boron (B)

- » "switching element" of carbohydrate metabolism processes
- » carbohydrate "mobilizer" element
- » **it regulates the water uptake of the germinating seed, i.e. it affects the swelling processes of the seed in the first days.**

### > Molybdenum (Mo)

- » Catalytic nutrient in almost all enzymatic processes bound to metal components,
- » helps to absorb and incorporate boron,
- » **regulates initial nitrogen uptake.**

Another outstanding advantage of MagMAX is that it can be mixed well with other dressings, increasing their adhesion, efficiency and coloring effect.

# FIELD



# FOR ARABLE LAND CULTURES

## COMPOSITION OF PRODUCTS

Multi-fertilizer solution fertilizers (w / v%)		N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	MgO	SO <sub>3</sub>	CaO	Fe	Mn	Cu	Zn	B	Mo	Field dose
		%	%	%	%	%	%	%	%	%	%	%	%	l/ha
1	FitoHorm Grain	18	-	-	-	-	-	-	0,25	1,5	0,25	-	0,002	4-5
2	FitoHorm Bio Grain	-	-	-	-	-	-	0,5	1	1,8	0,3	0,3	0,03	4-5
3	FitoHorm Corn Plus	19	-	-	-	6	-	0,15	0,06	0,006	1,9	0,013	0,003	4-5
4	FitoHorm Oil Crops	18	-	-	-	6	-	-	-	-	-	4	0,04	4-5
5	FitoHorm Grapes-Fruits	-	-	-	-	-	-	3,2	0,32	0,15	0,15	0,31	0,03	4-5
6	FitoHorm Vegetables	18	-	-	5	13,5	-	-	0,2	-	-	0,2	0,004	4-5
7	MAKROSOL	8	4	5	-	-	-	-	-	-	-	-	-	4-5
8	MikroMax	-	-	-	-	-	-	3	1,32	0,15	0,23	0,26	0,07	2-3
9	FitoHorm Soya	-	-	-	-	-	-	0,4	0,5	0,5	1,5	0,5	0,3	2-3


High Fertilizer Solution Fertilizers (w / v%)		N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	MgO	SO <sub>3</sub>	CaO	Fe	Mn	Cu	Zn	B	Mo	Field dose
		%	%	%	%	%	%	%	%	%	%	%	%	l/ha
1	Polyboron 140	-	-	-	-	-	-	-	-	-	-	14	-	2-3
2	Polyboron Plus	-	-	-	-	-	-	-	-	0,15	0,15	12,5	0,03	2-3
3	FitoHorm Turbo Nitrogen	30	-	-	3	6,5	-	-	-	0,01	-	-	-	10-15
4	FitoHorm Turbo Sulfur	20	-	-	-	60	-	-	-	-	-	-	-	2-3
5	FitoHorm Turbo Potassium	4	-	36	-	57	-	-	-	-	-	-	-	2-3
6	FitoHorm Turbo Calcium	13,5	-	9	3	-	15	-	-	-	-	-	-	3-5
7	FitoHorm Turbo Copper	20	-	-	-	11,5	-	-	-	8	-	-	-	2-3
8	FitoHorm Turbo Zinc	-	-	-	-	-	-	-	-	-	10	-	-	2-3
9	FitoHorm Turbo Manganese	-	-	-	-	-	-	-	8	-	-	-	0,5	2-3

## COMPOSITION OF PRODUCTS

Mono Elemental Fertilizers (w / v%)		Composition (%)				Field dose l/ha
1	FitoHorm 10 B	Boron Solution	B	2,5		3-4
2	FitoHorm 14 N	Nitrogen Solution	N	35		5-10
3	FitoHorm 24 Mg	Magnesium Solution	MgO	6,6	+ SO <sub>3</sub> 10,6%	5-10
4	FitoHorm 30 P	Phosphorus Solution	P <sub>2</sub> O <sub>5</sub>	18	+ N 7%	5-10
5	FitoHorm 39 K	Potassium Solution	K <sub>2</sub> O	9	+ P <sub>2</sub> O <sub>5</sub> 6% + N 3%	5-8
6	FitoHorm 40 Ca	Calcium Solution	CaO	21	+ N 12%	5-7
7	FitoHorm 40 Ca (nitrogen-free)	Calcium Solution	CaO	17		5-7
8	FitoHorm 54 Mn	Manganese Solution	Mn	4		3-5
9	FitoHorm 55 Fe	Iron Solution	Fe	4		3-5
10	FitoHorm 63 Cu	Copper Solution	Cu	4		4
11	FitoHorm 65 Zn	Zinc Solution	Zn	4		3-6
12	FitoFerr T-3 for soil treatment	Iron Solution	Fe	3		50-100 ml/vine

Plant conditioners		Composition				Field dose l/ha
1	HERBAL	Multiphase, biologically superior organic materials.				5-10

Starter solution fertilizers (w / v%)		N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	MgO	SO <sub>3</sub>	CaO	Fe	Mn	Cu	Zn	B	Mo	Field dose l/ha
		%	%	%	%	%	%	%	%	%	%	%	%	
1	FitoHorm Turbo Start	11	23	-	-	-	-	0,025	-	0,003	0,3	0,017	0,0014	3-5
2	FitoHorm Turbo Phosphorus	4	28	26	-	-	-	-	-	-	-	-	-	2-3
3	FitoHorm Turbo Magnesium	4	35	-	10	-	-	-	-	-	-	-	-	2-3
4	FitoHorm Turbo Macro	18	18	18	-	-	-	-	-	-	-	-	-	3-4

Seed fertilizer (m/v %)		N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	MgO	SO <sub>3</sub>	CaO	Fe	Mn	Cu	Zn	B	Mo	Seed dose l/t
		%	%	%	%	%	%	%	%	%	%	%	%	
1	FitoHorm MagMAX 	-	-	-	-	-	-	-	1,3	-	2,5	0,2	0,1	4-5





# CEREALS

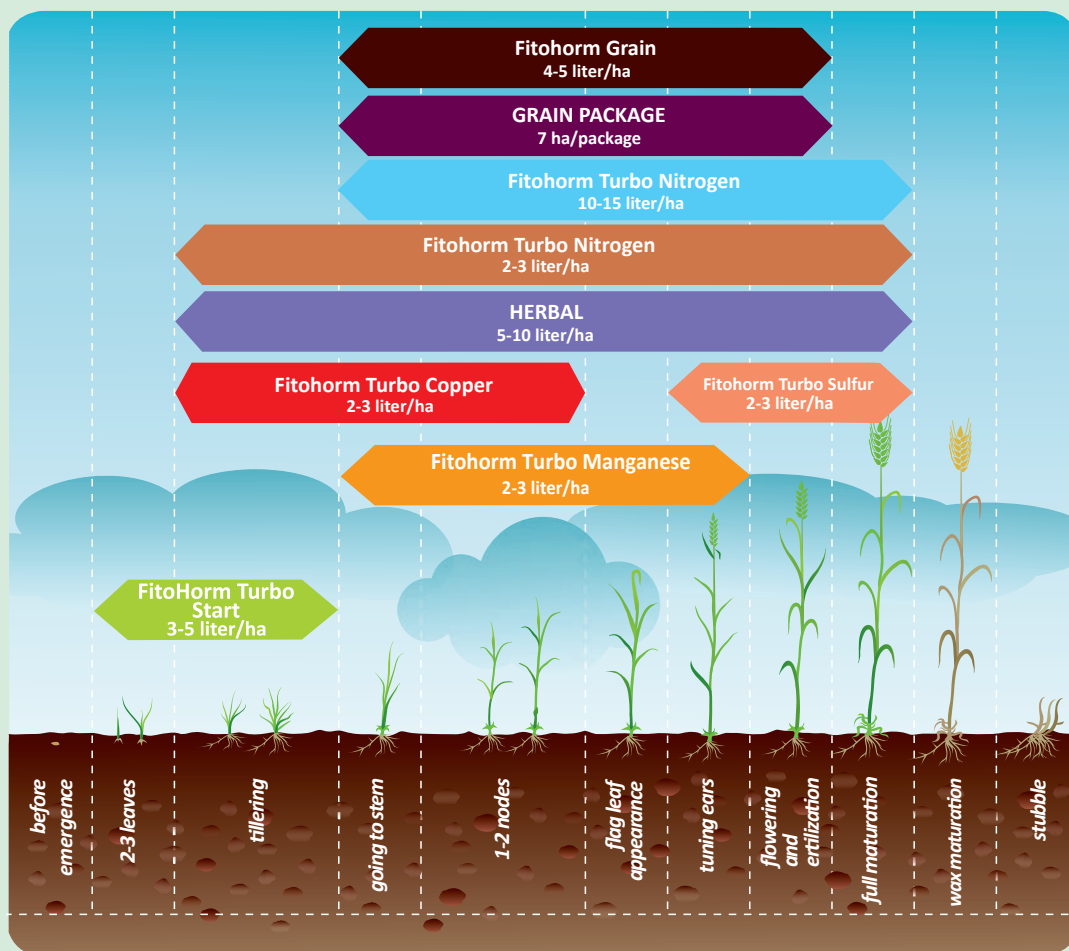
## OUR GENERAL TECHNOLOGICAL PROPOSAL

FIELD

APPLICATION		
I. IN AUTUMN	II. THE END OF BROWNING, AT GOING TO STEM IN SPRING	III. AT THE BEGINNING OF FLOWERING
<b>PURPOSE:</b>		
1. induction of large number of shrubby nodules.	1. Completion of shrubby and increase in fiber count.	1. Completing the bonding.
2. Complete the differentiation of the spike.	2. To facilitate a smooth stalkin and stem growth.	2. Improving quality.
	3. Facilitate the lifting and pushing of strong spike.	3. Reducing the stress of drought damage.
<b>AJÁNLOTT LOMBTRÁGYA:</b>		
<b>FitoHorm Turbo Sulfur</b> (2-3 liter / ha) + <b>FitoHorm Turbo Start</b> (3-5 liter / ha)	<b>FitoHorm Grain or FitoHorm BioGrain</b> (4-5 liter / ha / occasion)	<b>FitoHorm Grain</b> (7 ha / package*)

**Note:** \* 1 Grain package contains: 20 liter FitoHorm Grain+ 20 liter FitoHorm Turbo Sulfur product.

RECOMMENDED FERTILIZER:		
PRODUCT	DOSE/HA	PURPOSE OF APPLICATION
FitoHorm Turbo Nitrogen	10-15 liter	Due to the formaldehyde component, it provides a gradual and steady supply of nutrients for several weeks, with a very low risk of scalding.
FitoHorm Turbo Manganese	2-3 liter	It strengthens rooting and the formation of flower organs.
MikroMax	2-3 liter	A micronutrient bomb that can be used throughout the growing season.



## FARMER'S OPINION

**Tibor Villám- Family farmer**

Tata

We farm 220 ha in Komárom-Esztergom county, Tata. Due to the decrease in the annual rainfall and its unfavorable (spatial and temporal) distribution, we pay increased attention to the continuous supply of nutrients to our plants through the leaves. For years, we have been using the products of FitoHorm Kft with great satisfaction. In the case of our cereal crops, we place great emphasis on the sensible replacement of Copper. FitoHorm Turbo Copper is excellent for this. In the further stages of development, we also use FitoHorm Grain, Turbo Sulfur and Turbo Nitrogen products.



# AUTUMN COLESEED

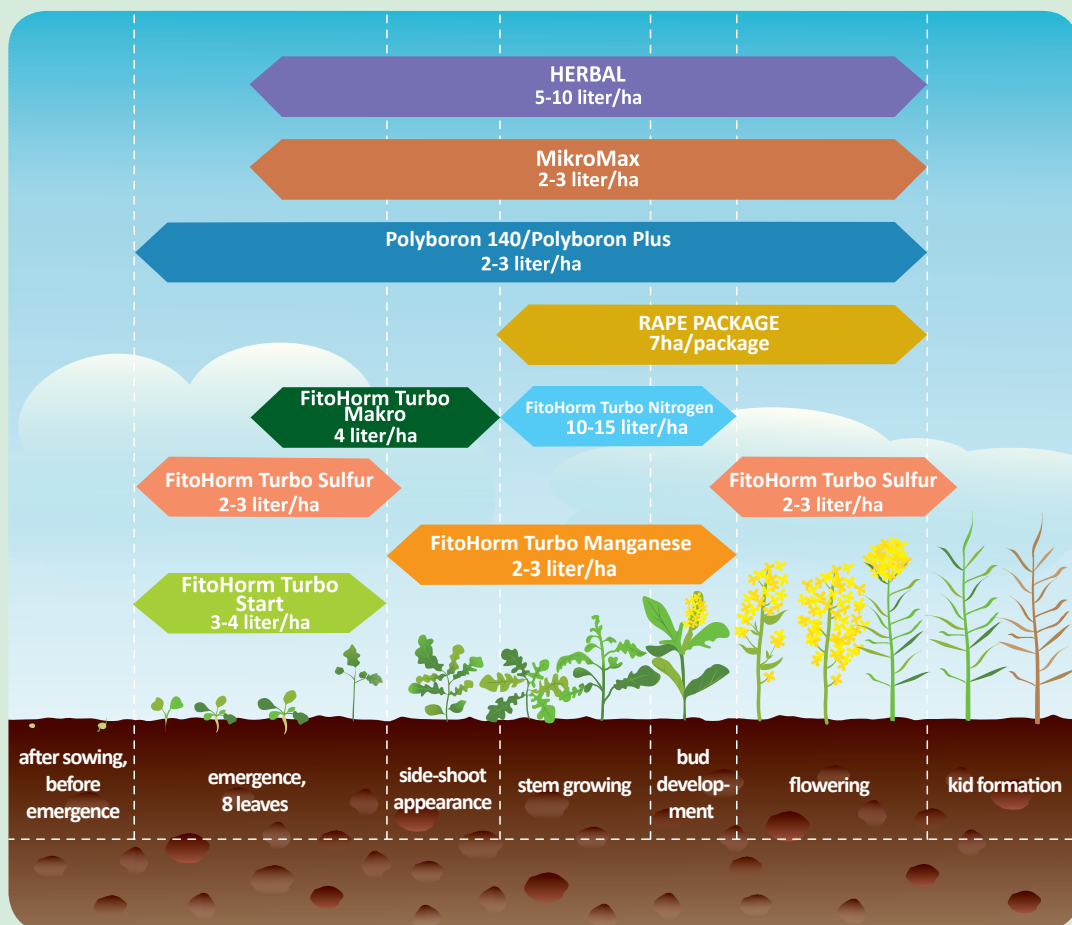
## OUR GENERAL TECHNOLOGICAL PROPOSAL

FIELD

APPLICATION		
I. IN AUTUMN	II. BEFORE GOING TO THE STEM	III. IN GREENBUD STATUS / AT THE BEGINNING OF FLOWERING
<b>PURPOSE:</b>		
1.Improving winter resistance.	1. Improve the application of nitrogen fertilizer from the soil.	1. Completing the bonding.
2. Helping bud differentiation.	2. .Buds, side buds helping to differentiate.	2. Increasing the oil content.
3. Ensure faster regeneration at the end of winter.	3. Minimize kick kick due to lack of nutrients.	3. Proper flowering dynamics to promote .
<b>RECOMMENDED FERTILIZER</b>		
<b>Polyboron Plus</b> (3 liter / ha) and <b>FitoHorm Turbo Start</b> (3-5 liter / ha)	<b>FitoHorm Oil crop</b> (5 liter / ha) or <b>RAPE PACKAGE</b> (7 ha / package) *	

**Note:** \* 1 RAPE PACKAGE contains: 20 liter Polyboron 140 + 20 liter FitoHorm Turbo Sulfur product.

FURTHER USE POSSIBILITIES		
PRODUCT	DOSE/ HA	PURPOSE OF APPLICATION
FitoHorm Turbo Macro	3-4 liter	It helps to regenerate very quickly, activates the internal defense mechanism of the plants.
FitoHorm Turbo Manganese	2-3 liter	It strengthens rooting and the formation of flower organst.
FitoHorm Turbo Calcium	4-5 liter	At the beginning of intensive growth to prevent stem rupture.



## FARMER'S OPINION

János Lipták - self-employed  
Katymár

In my farming, I always strive for the maximum possible, so I have been using various foliar fertilizers for years to increase yield and quality and maintain plant health. The micro and mesoelement deficiencies detected by leaf analyzes can be filled in the cheapest, most efficiently, and easiest way with FitoHorm foliar fertilizers. I have already proven FitoHorm, I recommend it to others!





# CORN

## OUR GENERAL TECHNOLOGICAL PROPOSAL

FIELD

### APPLICATION

I. 4-12 level status file as management	II. at the time of tasselling
<b>PURPOSE::</b>	
1.Improves the uptake of applied fertilizer from the soil.	1.Completing the bonding.
2. to help with the formation of the tube and the line of eyes and the length of the tube.	2.To help in water and nutrient exploration.
<b>RECOMMENDED FERTILIZER</b>	
<b>FitoHorm Turbo Phosphorus</b> (2-3 liter / ha) or <b>FitoHorm Corn Plus*</b> (4-5 liter / ha)	<b>CORN PACKAGE</b> (10 ha / package) **
	<b>FitoHorm Corn Plus</b> (4-5 liter / ha)

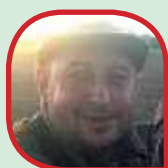
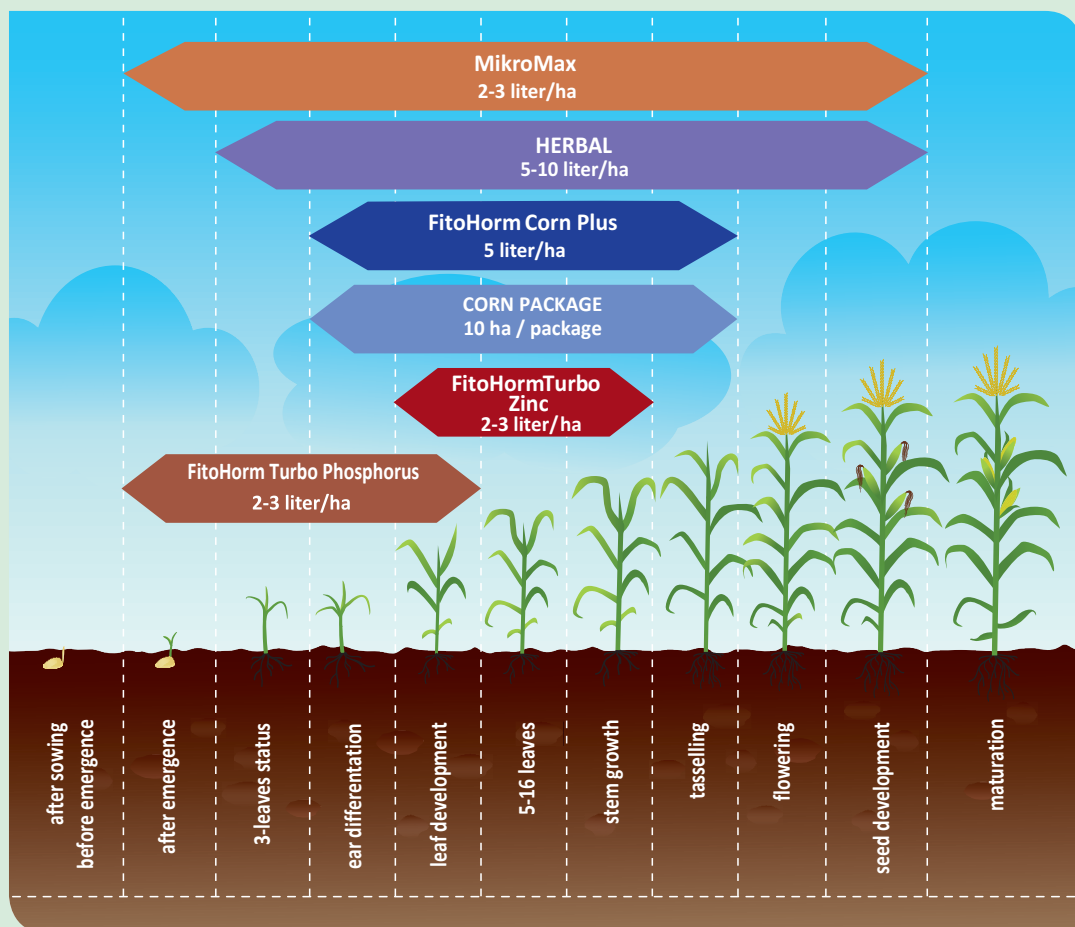
**Note:** \* Mixing with hormonal herbicides is not recommended!

\*\* 1 CORN PACKAGE contains 100 liter FitoHorm Turbo Nitrogen and 20 liter FitoHorm Turbo Zinc product

### FURTHER USE POSSIBILITIES

PRODUCT	DOSE/ HA	PURPOSE OF APPLICATION
FitoHorm Turbo Macro	3-4 liter	It initiates rooting, thickens the cell wall, thereby improving stem strength.
Herbal	5-10 liter	It strengthens the resistance of plants and increases the biological activity of the soil.
MikroMax	2-3 liter	This is a micronutrient bomb that can be used throughout the growing season.





## FARMER'S OPINION

Gergely Császár, Self-employed

Dáka

I have been using FitoHorm products with satisfaction for several years, including the Turbo Start product after germination in feed corn, and then the Turbo Zinc at 7-10 leaves stage. In 2020, it also managed to close with an average of over 10 t/ha.



# SWEETCORN

## OUR GENERAL TECHNOLOGICAL PROPOSAL

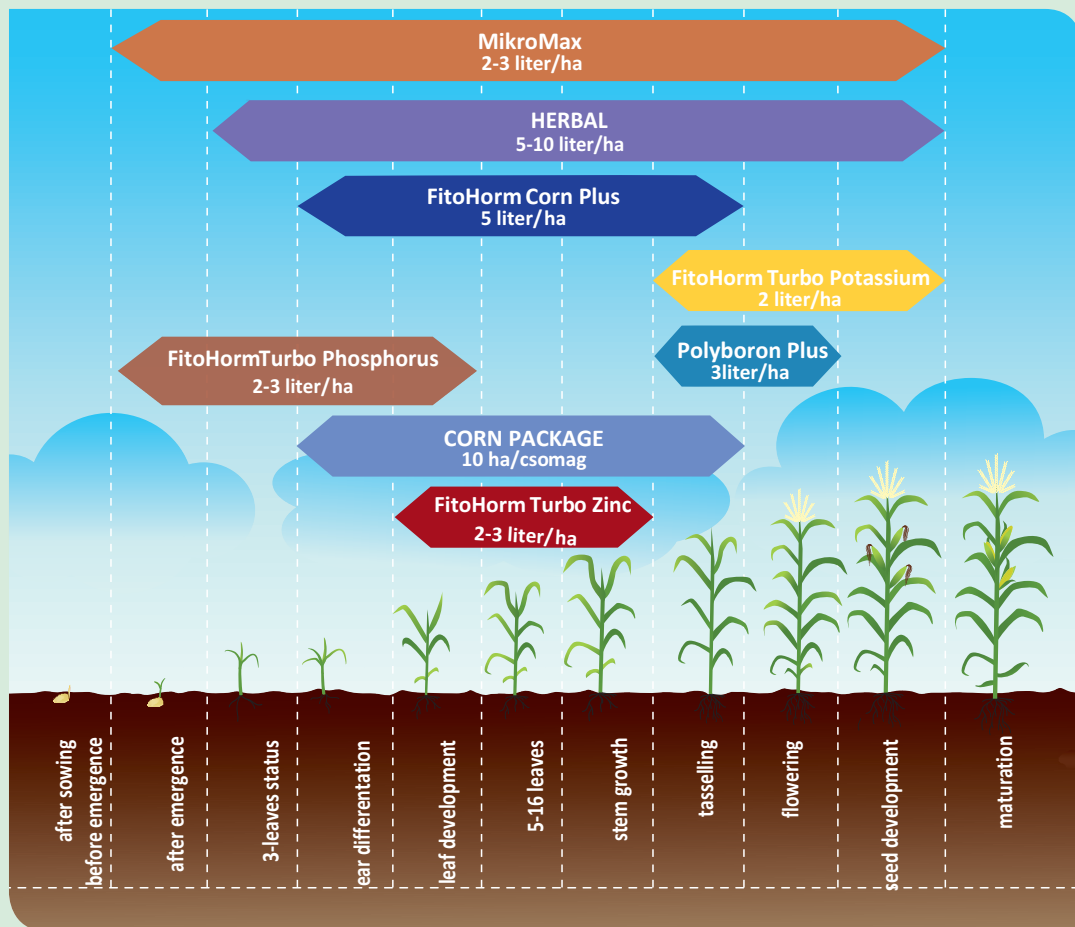
FIELD

APPLICATION		
I. 4-8 LEAVES STATUS AS FILE MANAGEMENT	II. AT THE TIME OF TASSELLING	III. AFTER CROP CONNECTION
<b>PURPOSE:</b>		
1. The fertilizer applied is from the soil improve your recording.	1. Completing the binding.	1. Keeping the flavour of seeds.
2. To facilitate the formation of the ear and the formation of seed lines and ear length.	2. To help with water and nutrient exploration.	2. Ensure the seeds are full.
<b>RECOMMENDED FERTILIZER:</b>		
<b>FitoHorm Turbo Phosphorus</b> (2-3 liter / ha) or <b>FitoHorm Corn Plus *</b> (4-5 liter / ha)	<b>Polyboron 140 or Polyboron Plus</b> (2-3 liter / ha) or <b>CORN PACKAGE</b> (10 ha / package) **	<b>FitoHorm Turbo Potassium</b> (at a concentration of 1% ) or <b>FitoHorm Turbo Sulfur</b> (2-3 liter / ha)

**Note:** \* Mixing with hormonal herbicides is not recommended

\*\* 1 CORN PACKAGE contains 100 liter FitoHorm Turbo Nitrogen and 20 liter FitoHorm Turbo Zinc product.

FURTHER USE POSSIBILITIES		
PRODUCT	DOSE / HA	PURPOSE OF APPLICATION
FitoHorm Turbo Makro	3-4 liter	It initiates rooting, thickens the cell wall, thereby improving stem strength.
Herbal	5-10 liter	It strengthens the resistance of plants and increases the biological activity of the soil.
MikroMax	2-3 liter	This is a micronutrient bomb that can be used throughout the growing season.



## FARMER'S OPINION

**Attila Fülöp - family farmer**  
Baks

I started farming as a foil tent gardener, where I learned how important the continuous replacement of mycopoints and mesoelements is. Today, field farming is our main activity, but I have not forgotten the experience I gained in the past. In recent years, I have started using FitoHorm products, with which I have achieved very good results. In delicacy corn, we basically use Turbo Start, Turbo Sulfur and finally Turbo Potassium successfully! I recommend it to others!



# SUNFLOWER

## OUR GENERAL TECHNOLOGICAL PROPOSAL

FIELD

### APPLICATION

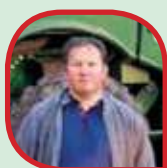
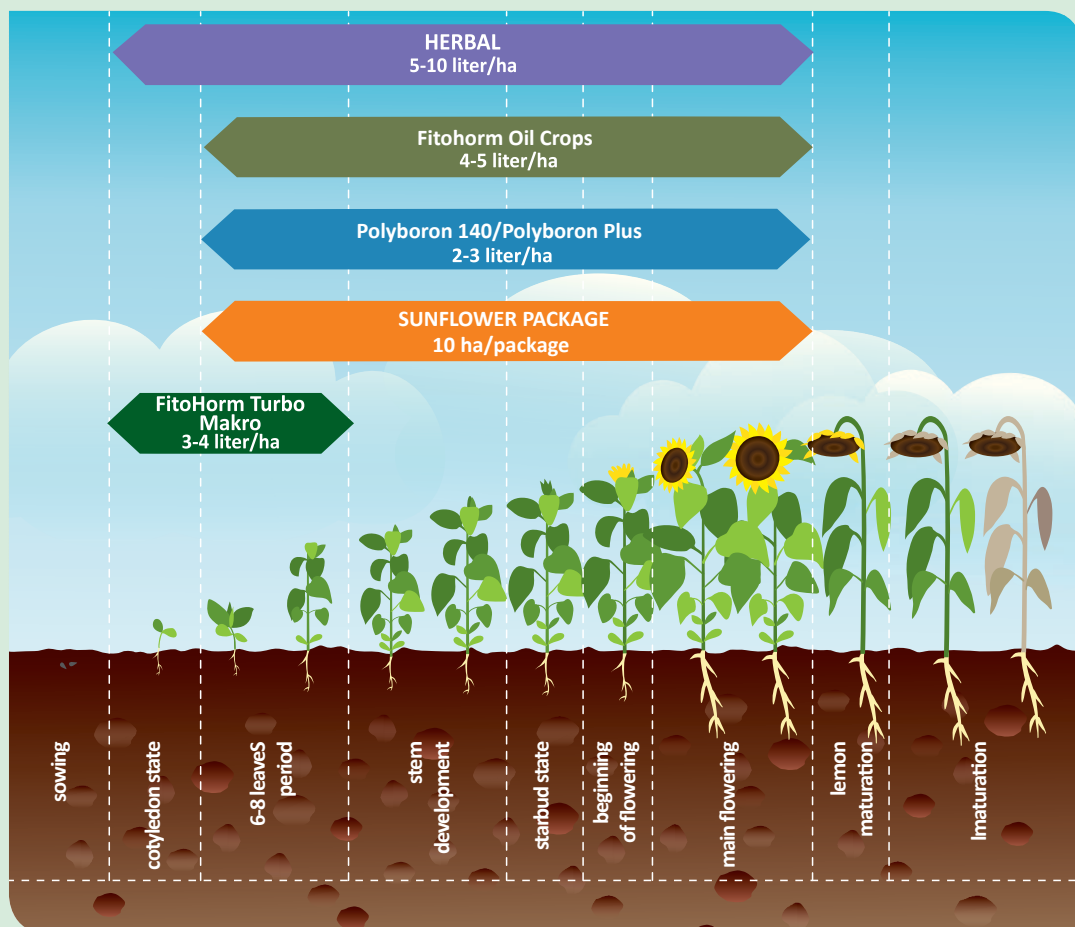
I. FILE MANAGEMENT IN 4-6 LEAVES STATUS	II. IN STARBING STATE AT THE BEGINNING OF FLOWERING
PURPOSE:	
1.Improves the uptake of applied fertilizer from the soil.	1. Completion of Binding.
2. Supporting deep rooting, thus reducing the drought.	2. Increase oil absorption.
3. Minimize the effect of environmental and agro technology stress.	
RECOMMENDED FERTILIZER:	
FitoHorm Oil crops (4-5 liter / ha) or SUNFLOWER PACKAGE (10 ha / package) *	SUNFLOWER PACKAGE (10 ha/ package *) or Polyboron 140 (3 liter / ha) + FitoHorm Turbo Sulfur (2 liter / ha)

**Note:** \* 1 SUNFLOWER PACKAGE contains 20 liter Polyboron Plus + 20 liter FitoHorm Turbo Potassium product.

### FURTHER USE POSSIBILITIES

PRODUCT	DOSE / HA	PURPOSE OF APPLICATION
FitoHorm Turbo Makro	3-4 liter	It initiates rooting, thickens the cell wall, thereby improving stem strength.
Herbal	5-10 liter	It strengthens the resistance of plants and increases the biological activity of the soil.
MikroMax	2-3 liter	A micronutrient bomb that can be used throughout the growing season.





**Attila Bakos - Plant Protection Director, Agricultural Cooperative Hort**

FitoHorm's products are mostly used in our cereal, rapeseed and sunflower fields, in recent years these are typically Turbo Makro and Polyboros, which are well-mixed, good value for money, proven products that we strongly recommend.



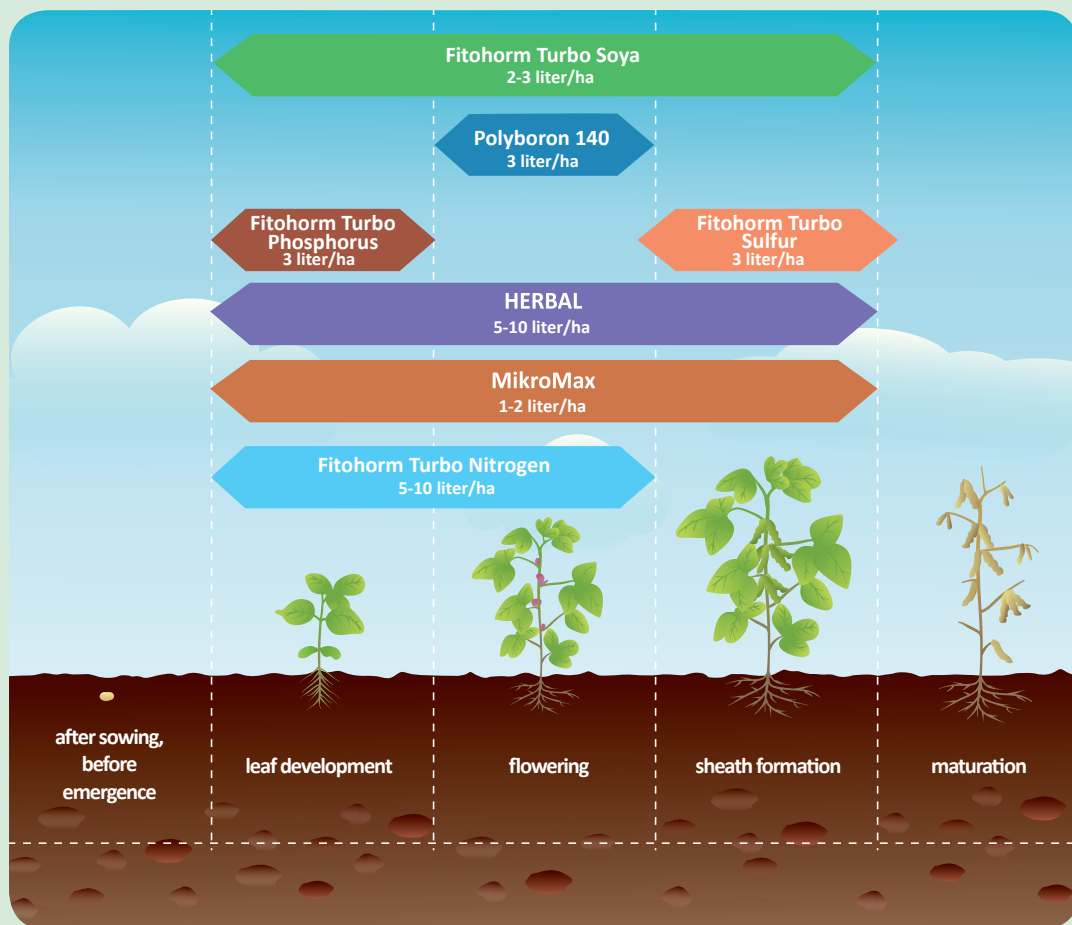
# SOYA, BEANS, PEAS

## OUR GENERAL TECHNOLOGICAL PROPOSAL

FIELD

APPLICATION		
FROM 4-LEAVES STATUS TO FLOWERING 1-3 APPLICATION	IN FLOWERING 1-2 APPLICATION	IN THE PERIOD OF SEED GROWTH 1-2 APPLICATION
PURPOSE::		
1. Helping the formation of root nodules.	1. To facilitate fertilization.	1. Improve nutrient and water intake from soil.
2. Ensuring dynamic development.	2. To facilitate the flow of assimilates and integration into the plant.	2. To prevent the occurrence of trace element deficiency due to load.
		3. Provide large amounts of protein and oil intake.
RECOMMENDED FERTILIZER:		
FitoHorm Soya (2-3 liter / ha)	Polyboron 140 (3 liter / ha) or Polyboron Plus (2-3 liter / ha)	FitoHorm Soya (2-3 liter / ha) + FitoHorm Turbo Sulfur (2-3 liter / ha)

FURTHER USE POSSIBILITIES		
PRODUCT	DOSE / HA	PURPOSE OF APPLICATION
FitoHorm Turbo Nitrogen	5-10 liter	Due to the formaldehyde component, it provides a gradual and steady supply of nutrients for several weeks, with a very low risk of scalding.
Herbal	5-10 liter	It reduces and cures stress caused by environmental and herbicides.
MikroMax	2-3 liter	A micronutrient bomb that can be used throughout the growing season.



**György Mentés - family farmer**  
Sopronkövesd

In my family farm, we have been using FitoHorm Kft's products regularly for years, in almost every culture. These products fit perfectly into the technology of soybeans that are tight and require sufficient precision, and can be mixed with pesticides. Polybor Plus, Polybor 140 and Turbo Sulfur are used as stable technological elements in soy.



# SUGAR BEET

## OUR GENERAL TECHNOLOGICAL PROPOSAL

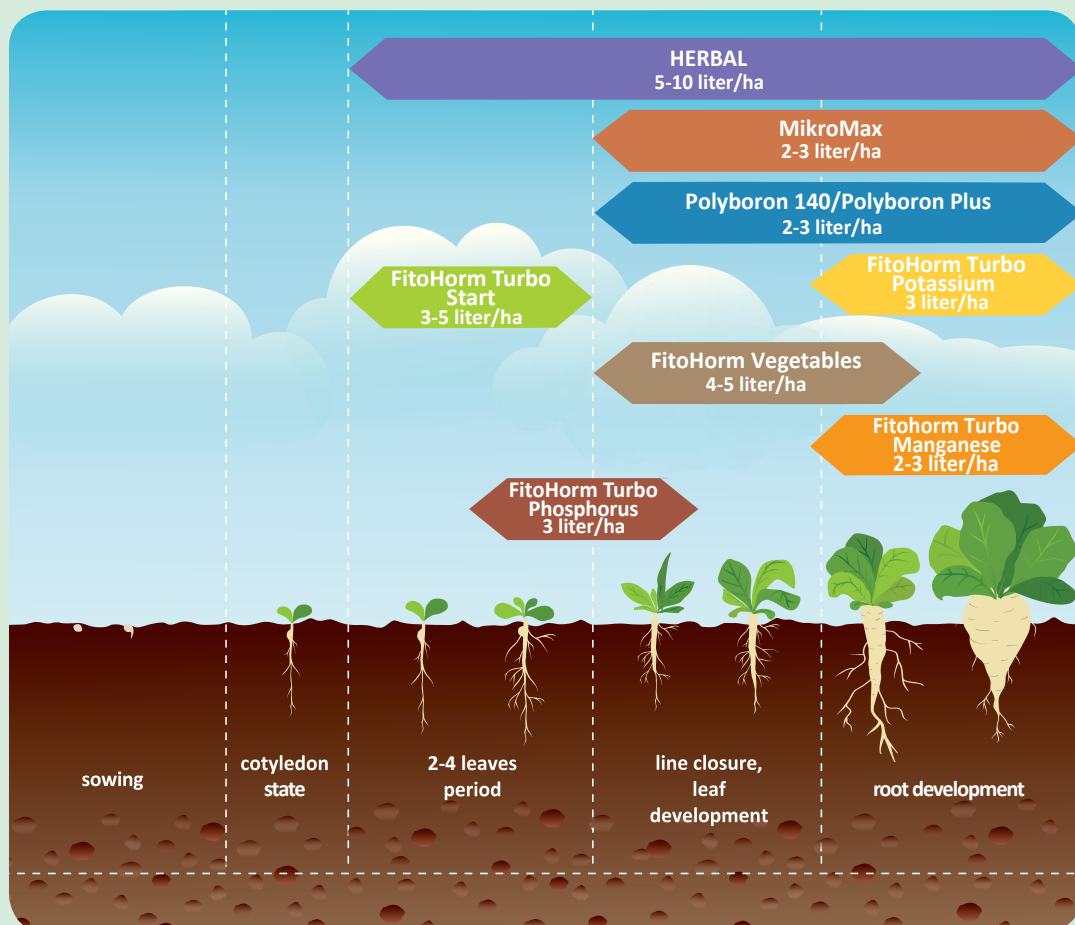
FIELD

### APPLICATION

I. 2-3 LEAVES PERIODS	II. IN 5-6 LEAVES PERIODS	III. IN ROOT GROWTH / THICKNESS PERIOD	IV. STRENGTHENING OF CANOPY
<b>PURPOSE:</b>			
1. Promotion of deep penetrating root system.	1. Increasing green mass.	1. Prevention of heart rot.	1. Weight gain of beet.
2. Energy transport processes acceleration.	2. Increasing stress tolerance.	2. Increasing of osynthetic activity.	2. Increasing the transport of carbohydrates
	3. Micro-element charging, increasing of photosynthetic activity.	3. Enhance disease resistance	3. Ensuring better sugar uptake
<b>RECOMMENDED FERTILIZER:</b>			
<b>FitoHorm Turbo Start</b> (2-3 liter / ha)	<b>FitoHorm Vegetables</b> (4-5 liter / ha) + <b>MikroMax</b> (2-3 liter / ha)	<b>Polyboron 140</b> (3 liter / ha) + <b>MikroMax</b> (2-3 liter / ha)	<b>FitoHorm Turbo Potassium</b> (3 liter / ha) + <b>Polyboron Plus</b> (2 liter / ha)

### FURTHER USE POSSIBILITIES

PRODUCT	DOSE / HA	PURPOSE OF APPLICATION
FitoHorm Turbo Phosphorus	3-4 liter	It assists in the uptake and utilization of nutrients in the soil. Improves the condition of plants.
Herbal	5-10 liter	It strengthens the resistance of plants and increases the biological activity of the soil.
FitoHorm Turbo Manganese	2-3 liter	It improves sugar content.



**Csaba Csereveni - family farming**

Szigetvár

"We have been using the wide range of FitoHorm products with complete satisfaction for many years. In sugar beet, the Polybor and Polybor Plus products are the flagships of technology in sensitive phenology because they do not completely show the symptoms of boron deficiency when using the product. During the period of sugar formation, we have a favorable experience with the FitoHorm Turbo Potassium product. We also use FitoHorm products for other crops, where we also have good experience in terms of both applicability and effect!"



With the power of  
our herbs

# Herbal

*FitoHorm®*

SPECIAL HERBAL  
FORMULATION

A NEW GENERATION OF  
PLANT CONDITIONERS

MAXIMUM YIELD,  
MINIMUM SPEND



# HORTI- CULTURE





# FOR HORTICULTURAL CULTURES

## COMPOSITION OF PRODUCTS

High Fertilizer Solution Fertilizers (w / v%)		N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	MgO	SO <sub>3</sub>	CaO	Fe	Mn	Cu	Zn	B	Mo	plantation dose	Horticultural Dose (ml/10 l water)	
		%	%	%	%	%	%	%	%	%	%	%	%	l/ha	foliage treatment	watering
1	Polyboron 140	-	-	-	-	-	-	-	-	-	-	14	-	2-3	40-60	10
2	Polyboron Plus	-	-	-	-	-	-	-	-	0,15	0,15	12,5	0,03	2-3	40-60	10
3	FitoHorm Turbo Nitrogen	30		-	3	6,5	-	-	-	0,01	-	-	-	10-15	100-240	20-40
4	FitoHorm Turbo Magnesium	4	35	-	10	-	-	-	-	-	-	-	-	2-3	80-100	20
5	FitoHorm Turbo Phosphorus	4	28	26	-	-	-	-	-	-	-	-	-	2-4	40-60	10
6	FitoHorm Turbo Sulfur	20	-	-	-	60	-	-	-	-	-	-	-	2-3	80-100	20
7	FitoHorm Turbo Potassium	4	-	36	-	57	-	-	-	-	-	-	-	2-3	100	20
8	FitoHorm Turbo Calcium	13,5	-	9	3	-	15	-	-	-	-	-	-	3-5	80-160	20
9	FitoHorm Turbo Copper	20	-	-	-	11,5	-	-	-	8	-	-	-	2-3	80-160	20
10	FitoHorm Turbo Zinc	-	-	-	-	-	-	-	-	-	10	-	-	2-3	80-160	20
11	FitoHorm Turbo Makro	18	18	18	-	-	-	-	-	-	-	-	-	2-3	60-80	20
12	FitoHorm Turbo Manganese	-	-	-	-	-	-	-	8	-	-	-	0,5	2,3	80-160	20
Multi-fertilizer solution fertilizers (w / v%)		N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	MgO	SO <sub>3</sub>	CaO	Fe	Mn	Cu	Zn	B	Mo	plantation dose	Horticultural Dose (ml/10 l water)	
		%	%	%	%	%	%	%	%	%	%	%	%	l/ha	foliage treatment	irrigation
1	FitoHorm Garden	-	-	-	-	-	-	1,8	0,37	1,45	0,2	0,26	0,04	-	100-200	20
2	MikroMax	-	-	-	-	-	-	3	1,32	0,15	0,23	0,26	0,07	2-3	60-80	10
3	MAKROSOL	8	4	5	-	-	-	-	-	-	-	-	-	4-5	100-200	20
4	FitoHorm Evergreen	20	-	-	3	11	-	0,5	-	-	-	-	-	-	100-160	100
5	FitoHorm Lawn	20	-	-	3	-	-	0,5	-	-	-	-	-	-	100-160	100
6	FitoHorm Grapes-Fruits	-	-	-	-	-	-	3,2	0,32	0,15	0,15	0,31	0,03	4-5	100-160	20

## COMPOSITION OF PRODUCTS

Mono Elemental Fertilizers (w / v%)					Composition (%)					Plantation dose		Horticultural dose (ml/10 l water)			
										l/ha		foliage treatment	irrigation		
1	FitoHorm 10 B				Boron solution	B	2,5				3-4		100-200	10-50	
2	FitoHorm 14 N				Nitrogen solut	N	35				5-10		100-200	10-50	
3	FitoHorm 24 Mg				Mg solution	MgO	6,6	+ SO <sub>3</sub> 10,6%		5-10		100-200	10-50		
4	FitoHorm 30 P				P solution	P <sub>2</sub> O <sub>5</sub>	18	+ N 7%		5-10		100-200	10-50		
5	FitoHorm 39 K				Potassium solution	K <sub>2</sub> O	9	+ P <sub>2</sub> O <sub>5</sub> 6% + N 3%		5-8		100-200	10-50		
6	FitoHorm 40 Ca				Calcium solution	CaO	21	+ N 12%		5-7		100-200	10-50		
7	FitoHorm 40 Ca (nitrogen free)				Calcium solution	CaO	17			5-7		100-200	10-50		
8	FitoHorm 54 Mn				Mn solution	Mn	4			3-5		100-200	10-50		
9	FitoHorm 55 Fe				Iron solution	Fe	4			3-5		100-200	10-20		
10	FitoHorm 63 Cu				Copper solution	Cu	4			4		100-200	10-50		
11	FitoHorm 65 Zn				Zinc solution	Zn	4			3-6		100-200	10-20		
Solid, irrigating fertilizers (m/m %)		N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	MgO	SO <sub>3</sub>	CaO	Fe	Mn	Cu	Zn	B	Mo	Plantation dose	Horticultural dose
		%	%	%	%	%	%	%	%	%	%	%	%	l/ha	nutrient solution 100l water
1	FitoHorm Complex Plus	14	7	21	-	22	-	0,165	0,032	0,017	0,02	0,01	0,002	-	0,1-0,2 kg
2	FitoHorm Complex Plus Agro	10	-	36	2	5	-	0,165	0,032	0,017	0,02	0,3	0,002	-	0,1-0,2 kg
Iron chelates (w / v%)						Iron Content			Plantation dose				Horticultural dose		
1	FitoFerr T-3 for soil treatment					3			50-100 ml/vine				50-100 ml/vine		



## APPLE

In the case of **calcium deficiency**, the filamentous leaves may distort, the growth of the roots will stop, their apex mucus, brown and then die. If the calcium supply of apple trees is deficient, the calcium content of the fruit will be low, some parts of the tissue will collapse, and the fruit will have brown spots.

Recommended product for prevention and cure: **FitoHorm 40**.

**Ca** or **FitoHorm 40 Ca (nitrogen free)**.

In the case of **magnesium deficiency**, the leaves yellow, die and fall in two bands along the main vein. A "brush-like" may be formed, which is named after the leaves only at the end of the shoot. The fruit will be sour and poorly stored.

Recommended product for prevention and cure: **FitoHorm 24 Mg** or **FitoHorm Turbo Magnesium**.

A characteristic symptom of **boron deficiency** is dwarf staking, when flower formation is hindered and flowers fall off. Distortion of apples and browning of the flesh in patches are the most common storage diseases.

Recommended product for prevention and cure: **Polyboron 140**, **Polyboron Plus**.

Iron chlorosis is a common symptom of **iron deficiency**. In case of severe deficiency, the whole plant may turn yellow. The yellowing of leaves is always starts at the youngest, at the shoot tips. Recommended product for prevention and cure: **FitoHorm 55 Fe**.

A common symptom of **zinc deficiency** is the rosette of leaf due to small leaf and short taste intervals. The small leaves are completely yellow, stiff, curved and fragmented. The main and lateral veins remain green. Recommended product for prevention and cure: **FitoHorm 65 Zn** or **FitoHorm Turbo Zinc**.

One of the hallmarks of **copper deficiency** is apple. In case of deficiency, the filamentous shoots die and chlorosis and then necrosis occur on the leaves. Flowering and fruiting are absent, leaf growth stops, leaf blade turns, leaves fall off. The shoots get bald. Shoots dehydration and "witch sweep" also occur.

Suggested products for prevention and cure: **FitoHorm Turbo Copper**, and in organic plantations, **FitoHorm 63 Cu**.

In **manganese deficiency**, the pharyngeal chlorosis is very similar to the onset of iron deficiency, but the manganese deficiency does not begin on the youngest leaves. First, marbled yellowing occurs along the main and lateral veins. As yellowing intensifies, mesh chlorosis develops with "green blood vessels", and later yellowish-white speckles also occur.

Recommended products for prevention and cure: **FitoHorm Turbo Manganese** or **FitoHorm 54 Mn**.





## GENERAL FERTILIZER RECOMMENDATION IN THE APPLE CULTIVATION

APPLICATION					
I. AT THE BEGINNING OF FLOWERING	II. FROM YOUR CROP CONNECTION IN THE FIRST 50 DAYS, 1-12 DAYS	III. AT THE TIME OF INTENSIVE SHOOT GROWING 1-2 APPLICATIONS	IV. AT THE END OF FRUITGROWTH 1-2 APPLICATIONS	V. IN AUGUST 2 APPLICATIONS	VI. AT THE END OF SEPTEMBER AS A FINAL TREATMENT
RECOMMENDED FERTILIZER:					
Polyboron140 of Polyboron Plus	FitoHorm Turbo Calcium + FitoHorm 40 Ca	FitoHorm Turbo Phosphorus + MikroMax	FitoHorm Turbo Phosphorus + FitoHorm Complex Plus Agro	FitoHorm 40 Ca (nitrogen free)	MikroMax + Polyboron 140 or Polyboron Plus
RECOMMENDED DOSE:					
3 liter / ha / occasion	FitoHorm Turbo Calcium 4-5 liter / ha	FitoHorm Turbo Phosphorus 2 liter / ha	FitoHorm Turbo Phosphorus 2 liter / ha	5 liter / ha	MikroMax 2-3 liter / ha
	FitoHorm 40 Ca 4-5 liter / ha	MikroMax 1,5 liter / ha	FitoHorm Complex Plus Agro 5 kg / ha		Polyboron 140 or Polyboron Plus 3 liter / ha



**Gábor Molnár - family farming**  
Aba

Using FitoHorm 55 Fe as a foliar fertilizer, following the advice of a consultant, it "cured" our cherry orchard from chronic iron deficiency after 2-3 treatments. When applied in soil in 2019, FitoHorm T-3 "applied with a Marshall pump" at a dose of 1.5 - 2 dl / tree + 60-80 liters of water in the apple orchard "cured" the affected trees. In 2020, they were asymptotically green.



## PEACH, APRICOT AND PLUM

The most common meso and trace element deficiencies in stone fruit growing, which can be easily prevented and treated with the FitoHorm product line:

Peaches are the most demanding of magnesium. It responds to its lack by yield reduction. In **magnesium deficiency**, the leaves of the plants between the main veins turn yellow in two bands, then die and fall off.

Recommended product for prevention and cure: **FitoHorm 24 Mg** or **FitoHorm Turbo Magnesium**.

A typical symptom of **calcium deficiency** is that young peach leaves die or become distorted from the apex.

Recommended product for prevention and cure: **FitoHorm Turbo Calcium**, **FitoHorm 40 Ca**.

The role of manganese: a nutrient that influences yield. **Manganese deficiency** occurs mainly on alkaline soils, often in combination with potassium deficiency.

Recommended products for prevention and cure: **FitoHorm 54 Mn** or **FitoHorm Turbo Manganese**.

**Iron deficiency** has a negative impact on growth, winter resistance and water management. The leaves first turn yellow at the tips of the shoots, later fall off, and then the death of the shoots can begin.

Recommended product for prevention and cure: **FitoHorm 55 Fe**.

In the case of a **boron deficiency**, the plum fruit may crack, its coloration is poor, its attachment is poor, the filament leaves remain small and yellow, the apex of the shoot may die. The flesh shows necrosis, brown patches, and the fruit drips and ripens unevenly.

Recommended products for prevention and cure: **Polyboron Plus** or **Polyboron 140**.

A common symptom of **zinc deficiency** is a rosette of leaves due to small leaves and short flavors. The small leaves turn yellow, stand erect, curved and fragmented. Its deficiency also has a negative effect on flowering and fruiting. Brown spots appear in the flesh.

Recommended products for prevention and cure: **FitoHorm Turbo Zinc** and **FitoHorm 65 Zn**.

Other aphids of **copper deficiency** after apples are peaches, apricots and plums. Deficiency symptoms: stalks, deformation of leaves. The first symptoms occur with wavy rolling and falling of the leaf blade; later on, the shoot apex dries and "witch sweeps" occur, and the shoots become bald.

Recommended products for prevention and cure: **FitoHorm Turbo Copper** or **FitoHorm 63 Cu**.

## GENERAL FERTILIZER RECOMMENDATION IN PEACH, APRICOT AND PLUM CULTIVATION

APPLICATION				
I. AT THE BEGINNING OF FLOWERING	II. FROM THE APPEARANCE OF FOLIAGE 1-2 APPLICATIONS	III. AT INTENSIVE SHOOT GROWING 10-14 DAYS	IV. FROM THE COLORING OF FRUIT 4-5 DAYS	V. AT THE END OF SEPTEMBER AS FINAL TREATMENT
RECOMMENDED FERTILIZER:				
Polyboron 140 or Polyboron Plus	FitoHorm Turbo Makro + MikroMax	FitoHorm Turbo Calcium + MikroMax	FitoHorm Turbo Phosphorus + FitoHorm Complex Plus Agro	FitoHorm Turbo Potassium + Polyboron 140 or Polyboron Plus
RECOMMENDED DOSE:				
3 liter / ha / occasion (binding / frost tolerance)	FitoHorm Turbo Makro 3 liter / ha	FitoHorm Turbo Calcium 4 liter / ha	FitoHorm Turbo Phosphorus 2-3 liter / ha	FitoHorm Turbo Potassium 3 liter / ha
	MikroMax 2 liter / ha	MikroMax 1 liter / ha	FitoHorm Complex Plus Agro 3 kg / ha	Polyboron 140 or Polyboron Plus 2 liter / ha



Zoltán Szakács, family farming  
Sárosd

In the cherry, sour cherry, plum, apricot orchard, FitoHorm Turbo Makro (4-5 l / ha) and applied with FitoHorm MikroMax (2-3 l / ha) in 700 liters / ha spray have an excellent greening effect after each application. Value for money and the recommendations of the manufacturer's consultant are excellent preparations for all their products.



## CHERRY AND SOUR CHERRY

The most common meso- and trace element deficiency symptoms are:

**Calcium deficiency** is characterized by necrosis and distortion of the apex of the filamentous leaves. Recommended product for prevention and cure: **FitoHorm 40 Ca**. Excessive supply of lime most often results in "lime chlorosis", ie iron deficiency symptoms due to Ca antagonism.

In the case of **magnesium deficiency**, the leaves of the cherry and sour cherry, usually along the vein, appear on both sides, rarely on the edges, with severe yellowing and then death. Recommended product for prevention and cure: **FitoHorm 24 Mg** or **FitoHorm Turbo Magnesium**.

The symptom of **iron deficiency** is characteristic iron chlorosis. The yellowing of leaves at the shoot tip develops depending on the degree of deficiency (actual or relative), and even the whole plant may turn yellow. Eventually, the leaves die, fall and the twigs begin to die. Recommended product for prevention and cure: **FitoHorm 55 Fe**.

Symptoms observed with **boron deficiency** include fruit cracking, poor coloring, and binding; the filaments are small, yellowish, the apex of the shoot dies. Recommended product for prevention and cure: **Polyboron 140** or **Polyboron Plus**.

In the case of **manganese deficiency**, the symptoms appear on older leaves. First, a marbled yellowing begins along the main and lateral veins. As yellowing intensifies, mesh chlorosis develops with "greenheads" and then a yellowish-white speck appears. Bones are more sensitive to manganese deficiency than other fruits. Recommended product for prevention and cure: **FitoHorm 54 Mn**.

In the case of **zinc deficiency**, the common symptoms are small leaf and rosette leaf. The small leaves are completely yellow, erect, curved, fragmented. The main and lateral veins remain green. It also has a negative effect on flowering and fruiting. Recommended product for prevention and cure: **FitoHorm Turbo Zinc**, **FitoHorm 65 Zn**.

Cherry is the most sensitive of the two cultures. As these are the two earliest ripening fruit species, timing of nutrient application and best adaptation to nutrient uptake dynamics are of paramount importance. Both species are very demanding, both in terms of meso and trace elements.

The fruit develops, matures and develops next year's buds by the end of June. Subsequently, the quality development of shoots and production bases can be observed. Therefore, next year's harvest can be based on the FitoHorm foliar fertilizers applied during the summer.



## GENERAL FERTILIZER RECOMMENDATION IN CHERRIES AND SOUR CHERRIES CULTIVATION

APPLICATION					
I. AT FLOWERING AND FRUIT GROWING 7-10 DAYS	II. AT INTENSIVE GROWING 7-10 DAYS	III. AT FRUIT COLIRING 7-10 DAYS	IV. FROM JULY TO THE BEGINNING OF AUGUST 10-20 DAYS	V. BETWEEN THE END OF AUGUST AND BEGINNING OF SEPTEMBER 1-2 OCCASSION	VI. END OF SEPTEMBER
RECOMMENDED FERTILIZER:					
FitoHorm Turbo Phosphorus + Polyboron 140 or Polyboron Plus	FitoHorm Turbo Magnesium + MikroMax	FitoHorm Turbo Calcium	FitoHorm Turbo Potassium + MikroMax	FitoHorm Turbo Makro	Polyboron 140 or Polyboron Plus + MikroMax
RECOMMENDED DOSE:					
FitoHorm Turbo Phosphorus 2 liter/ha	FitoHorm Turbo Magnesium 3 liter/ha	FitoHorm Turbo Calcium 4 liter/ha	FitoHorm Turbo Potassium 3 liter/ha	FitoHorm Turbo Makro 3 liter/ha	Polyboron 140 or Polyboron Plus 3 liter/ha
Polyboron 140 or Polyboron Plus 2 liter/ha	MikroMax 2 liter/ha		MikroMax 1 liter/ha		MikroMax 2 liter/ha



László Szabó - family farmer  
Harta

Based on the recommendation of other farmers, we started working with FitoHorm foliar fertilizers in our cherry and peach plantation two years ago. The purpose of foliar fertilization was to replace the nutrients missing from our soils or difficult to absorb, which we managed to achieve perfectly. Based on the experience of the past years, I am now recommend it happily to others!





## WINE AND TABLE GRAPES

The foliar fertilization of grapes is of paramount importance. It has a large foliage surface, through which the properly formulated (FitoHorm) nutrient is quickly absorbed and utilized perfectly in terms of yield. Our foliar fertilizers provide the opportunity for vine-growers to prevent, cure, and control the whole process through countless physiological diseases.

Grapes are especially recommended for treatment with FitoHorm foliar fertilizers, so that the quality / quantity balance provides a beautiful, healthy and rich raw material for the wine. The wine grape varieties carry the characteristics of a future beverage, which also essentially determines the value of wine. It is therefore important that the plant develops under the most appropriate conditions and optimal ecological conditions for the species, using the most appropriate foliar fertilization technique.

**In all cases, perform a mixing test with the combination partners and observe all applicable crop protection regulations when applying!**

### PROFESSIONAL USERS ATTENTION!

**FitoHorm Turbo Phosphorus:** From intensive shoot growth use it every 14-21 days until veraisoning

- » Recommended dose: 3 liters / ha
- » Reduces the negative impact of environmental stress.
- » Starts the natural defense mechanism of plants, which reduces the occurrence of fungal infections, especially in the case of downy mildew! It prevents the early death of the vine (ESCA) and, if present in the plantation, suppresses it.
- » In its use in many vineyards, it has been found to improve the a sugar level and intensify the appearance of coloring.

## GRAPE NUTRIENT SUPPLY TECHNOLOGY

APPLICATION				
I. BEFORE AND IN FLOWERING	II. AT INTENSIVE SHOOT GROWING	III. AT BERRY GROWING	IV. AT VERAISONING	V. AT MATURITY
RECOMMENDED FERTILIZER:				
FitoHorm Turbo Phosphorus + Polyboron 140 or Polyboron Plus	FitoHorm Turbo Phosphorus or FitoHorm Turbo Magnesium	FitoHorm Turbo Makro + FitoHorm Grapes and Fruit	FitoHorm Turbo Phosphorus + FitoHorm Grapes and Fruit	FitoHorm Turbo Potassium or FitoHorm Turbo Phosphorus + Polyboron140 or Polyboron Plus
RECOMMENDED DOSE:				
FitoHorm Turbo Phosphorus 2-3 liter/ha	FitoHorm Turbo Phosphorus 2-3 liter/ha	FitoHorm Turbo Makro 2-3 liter/ha	FitoHorm Turbo Phosphorus 2-3 liter/ha	FitoHorm Turbo Potassium 2-3 liter/ha
+Polyboron 140 or Polyboron Plus 2-3 liter/ha	FitoHorm Turbo Magnesium 2-3 liter/ha	+ FitoHorm Grapes-Fruits 4-5 liter/ha	+ FitoHorm Grapes-Fruits 4-5 liter/ha	FitoHorm Turbo Phosphorus 2-3 liter/ha + Polyboron 140 or Polyboron Plus 2-3 liter/ha



**Attila Maróti - winemaker**  
Mátra Wine Region

With FitoHorm Turbo products, I can satisfy the nutrient needs of the plant by spraying according to the vegetative and generative phases of the grape.



# POTATO

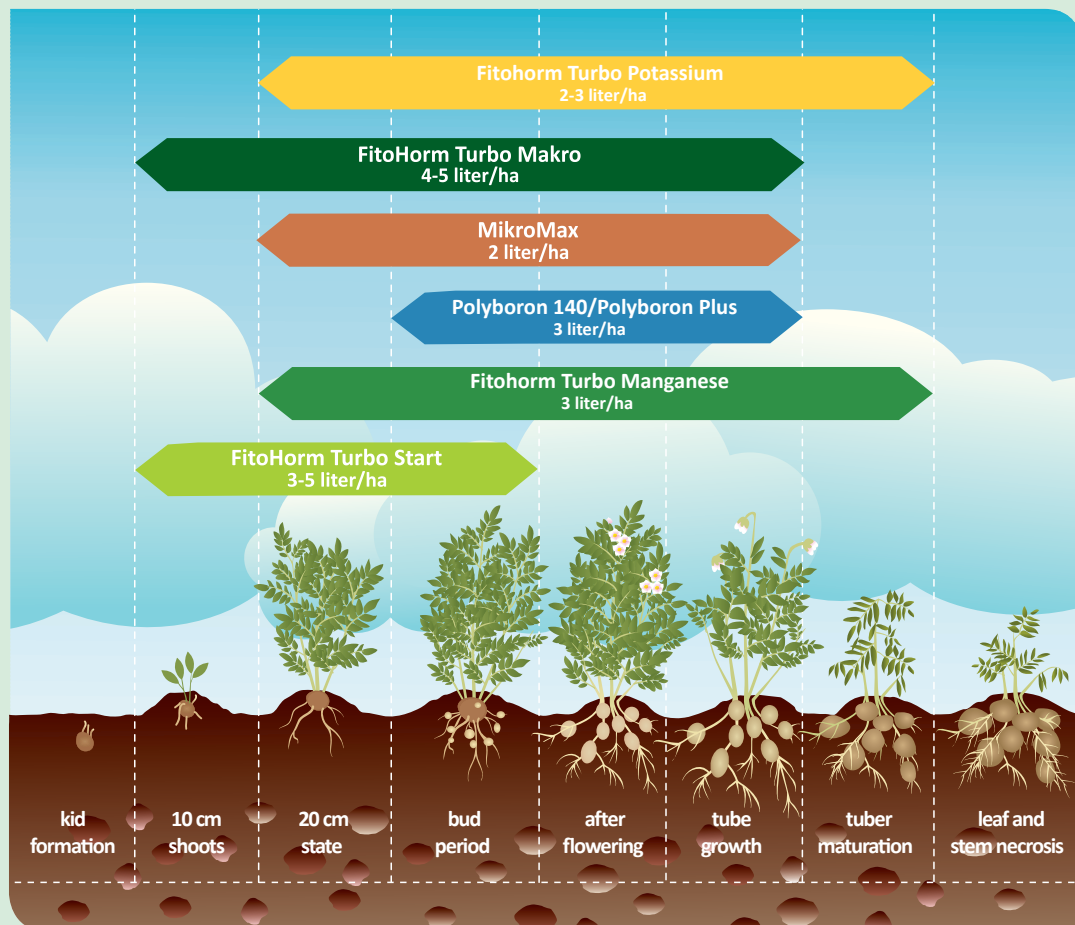
## OUR GENERAL TECHNOLOGICAL PROPOSAL

### APPLICATION

I. AT 10 CM GROWTH OF SHOOTS	II. AT 20-30 CM GROWTH OF SHOOTS	III. AT FLOWERING	IV. TUBER GROWTH PERIOD
PURPOSE:			
1. Promote deep penetration of root system.	1. Increasing green mass.	1. Enhancing disease resistance.	1. Increasing weight of tuber.
2. Acceleration of energy transport processes.	2. Increasing stress tolerance.	2. Increasing photosynthetic activity.	2. Increasing carbohydrate transportation.
RECOMMENDED FERTILIZER:			
<b>FitoHorm Turbo Start</b> + <b>FitoHorm Soya</b>	<b>FitoHorm Turbo Magnesium</b> + <b>FitoHorm Soya</b>	<b>Polyboron Plus</b> + <b>MikroMax</b>	<b>FitoHorm Turbo Makro</b> + <b>MikroMax</b>
RECOMMENDED DOSE:			
FitoHorm Turbo Start <b>3-5 liter / ha</b>	FitoHorm Turbo Magnesium <b>3 liter / ha</b>	Polyboron Plus <b>3 liter / ha</b>	FitoHorm Turbo Makro <b>4-5 liter / ha</b>
FitoHorm Soya <b>2 liter / ha</b>	FitoHorm Soya <b>2 liter / ha</b>	MikroMax <b>2 liter / ha</b>	MikroMax <b>2 liter / ha</b>

### FURTHER USE POSSIBILITIES

PRODUCT	DOSE / HA	PURPOSE OF APPLICATION
FitoHorm Turbo Potassium	2-3 liter	It can be used to start slow or undeveloped stocks.
Herbal	5-10 liter	It reduces, cures environmental and herbal stress.



**Gergő Bartha – self-employed**

Papos

I have been growing vegetables for years, especially potatoes. Good quality content and shelf life are important to me, so I pay due attention to plant protection and nutrient replenishment. FitoHorm products are very proven, of which I use Turbo Calcium, Turbo Potassium and Turbo Magnesium, which I strongly recommend to others!



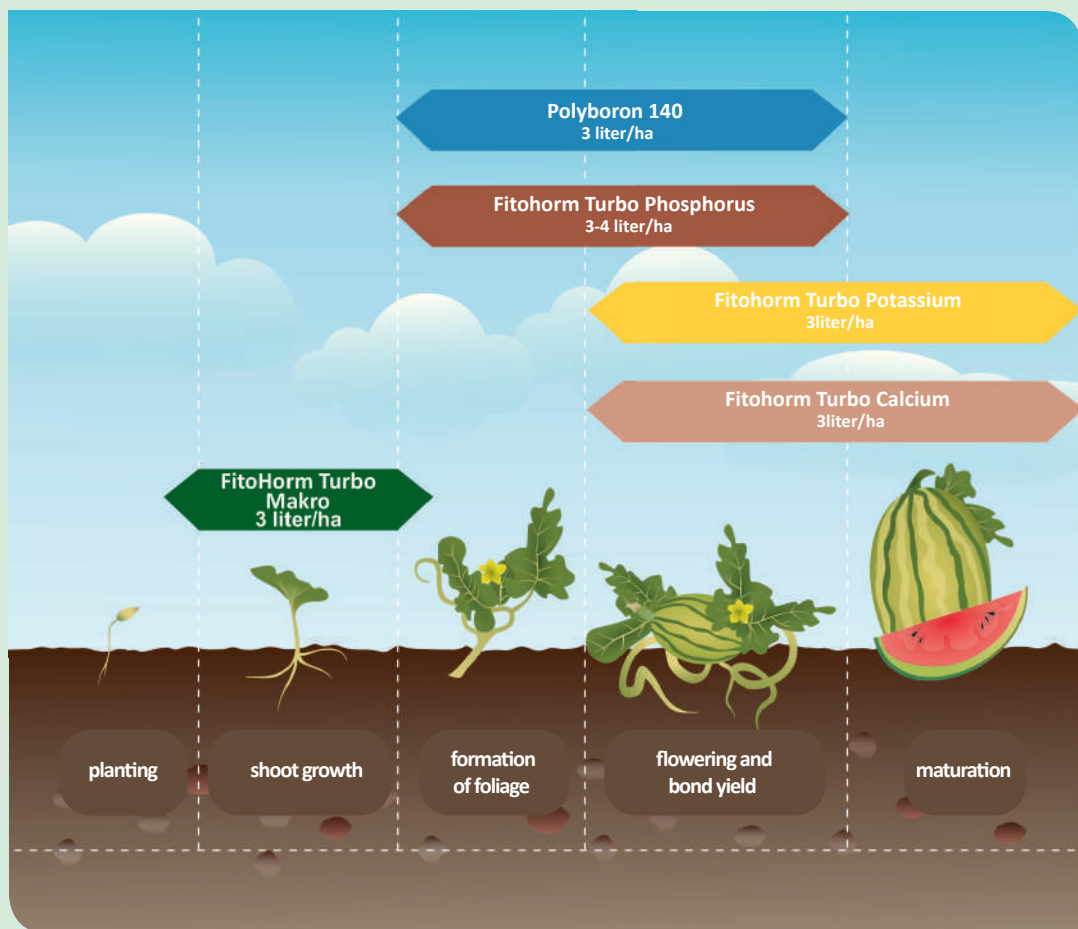
# CUCURBITS

## OUR GENERAL TECHNOLOGICAL PROPOSAL

APPLICATION				
I. AFTER PLANTING 7-10 DAYS	II. AT INTENSIVE DEVELOPMENT 1-2 OCCASION	III. AT FLOWERING 1 OCCASION	IV. WHEN SMALL QUOTAS ARE APPEARED 1 OCCASION	V. BEFORE MATURATION 1-2 OCCASION
PURPOSE:				
1. Reaching the right root system.	1. Preparing vegetative parts for flowering.	1. Binding promotion.	1. Prevention of Ca deficiency.	1. Improving crop quality.
2. Increasing resistance.				2. Increasing crop size.
RECOMMENDED FERTILIZER:				
FitoHorm Turbo Makro	FitoHorm Turbo Phosphorus	Polyboron 140 / Polyboron Plus	FitoHorm Turbo Calcium	FitoHorm Turbo Potassium+ FitoHorm Turbo Makro
RECOMMENDED DOSE:				
3 liter/ha	3-4 liter/ha	3 liter/ha	3 liter/ha	FitoHorm Turbo Potassium 3 liter/ha
				FitoHorm Turbo Makro 3 liter / ha

FURTHER USE POSSIBILITIES		
PRODUCT	DOSE / HA	PURPOSE OF APPLICATION
Herbal	5-10 liter	It reduces and cures stress caused by environmental and herbicides.
MikroMax	2-3 liter	A micronutrient bomb that can be used throughout the growing season.





**László Filep - family farmer**  
Nagybobos

I have been growing pumpkins for almost 20 years. At first, I only tried to produce high-quality products in my own garden, but today, with the involvement of my family, I try to produce high-quality products by cultivating 10 hectares in the border around Nagydobos, so I like to use FitoHorm Turbo Potassium and Turbo Phosphorus.

# OUR HIGHLIGHTS FOR HORTICULTURAL USE

## CLEANING THE CONVEYOR FABRIC WITH FITOHORM PHOSPHORUS FERTILIZER

### > Importance of autumn foliage treatment of grapes and fruits

The boron complexes produced by FitoHorm play an extremely important role in the overwintering and frost tolerance, as they are incorporated into the plant's tissues and help the carbohydrates and sugars to be transformed during the winter, thus protecting the plants from the cold. In addition, the death of flowers before opening can be reduced. It is important to fill our woody plants with autumn micronutrients, because the life processes of the plants do not cease during the dormancy period, they only slow down.

#### > Grapes

In vineyards, the healing effect of brix reliably appears almost independently of the vintage. As a result of the cleaning of the conveying tissues, the symptoms of Esca disease may disappear completely from our eyes when regularly treated. It is also a small advantage that over-intensive, lush plantations can effectively limit armpit formation and growth.



#### > Stone fruits

The protection of stone fruits against stroke and cancer can only be achieved in a complex manner. Both the bacterium and the fungus, both individually and together, may be involved in the cause of the disease. The circumstances of the infection and the course of the disease are similar in each case. The following preventive methods are effective against the two pathogens: One is to protect the woody parts from mechanical damage and to correctly choose the time of pruning. If you do not manage to protect your tree properly - eg. due to weather conditions (ice etc.), the other solution is to use phosphate-containing FitoHorm preparations immediately after injury.



# HOBBY

HOBBY



# FOR HOUSE PLANT, LEAF AND FLOWER ORNAMENTAL PLANT CULTURES

## COMPOSITIONS OF HOBBY PRODUCTS

Multi-fertilizer solution fertilizers (m/v %)		N %	P <sub>2</sub> O <sub>5</sub> %	K <sub>2</sub> O %	MgO %	SO <sub>3</sub> %	CaO %	Fe %	Mn %	Cu %	Zn %	B %	Mo %	Dosage (ml/ 10 l water)
1	FitoHorm Garden	-	-	-	-	-	-	1.8	0.37	1.45	0.2	0.26	0.04	100-200
2	MikroMax	-	-	-	-	-	-	3	1.32	0.15	0.23	0.26	0.07	60-80
3	MAKROSOL	8	4	5	-	-	-	-	-	-	-	-	-	100-200
4	FitoHorm Evergreen	20	-	-	3	11	-	0.5	-	-	-	-	-	100-160
5	FitoHorm Lawn	20	-	-	3	-	-	0.5	-	-	-	-	-	100-160
6	FitoHorm Grapes-Fruits	-	-	-	-	-	-	3.2	0.32	0.15	0.15	0.31	0.03	100-160
7	Polyboron Plus	-	-	-	-	-	-	-	-	0.15	0.15	12.5	0.03	100-160
Multi-active formulations for house and ornamental plants w/v		N %	P <sub>2</sub> O <sub>5</sub> %	K <sub>2</sub> O %	MgO %	SO <sub>3</sub> %	CaO %	Fe %	Mn %	Cu %	Zn %	B %	Mo %	Dosage (ml/ 10 l water)
1	FitoHorm Geranium	6	5	6	-	-	-	-	-	-	-	-	-	100
2	FitoHorm Leaf Ornamental plant	8	4	5	-	-	-	-	-	-	-	-	-	100
3	FitoHorm Flower Favorite Universal	6	6	6	-	-	-	-	-	-	-	-	-	100
4	FitoHorm Oleander	8	4	5	-	-	-	-	-	-	-	-	-	100
solid, irrigating fertilizers (w / w%)		N %	P <sub>2</sub> O <sub>5</sub> %	K <sub>2</sub> O %	MgO %	SO <sub>3</sub> %	CaO %	Fe %	Mn %	Cu %	Zn %	B %	Mo %	horticultural dose nutrient
1	FitoHorm Complex Plus	14	7	21	-	22	-	0.165	0.032	0.017	0.02	0.01	0.002	0.1-0.2 kg
2	FitoHorm Complex Plus Agro chelate	10	-	36	2	5	-	0.165	0.032	0.017	0.02	0.3	0.002	0.1-0.2 kg
(m/v %)		Iron content												Horticultural dose
1	FitoFerr T-3 soil treatment (Iron solution)	3												50-100 ml/wine

## > FitoHorm Favourite flowers

It contains a balanced amount of nutrients, usually to meet the life-sustaining needs of wintering indoor plants. With its use, the plants can be kept in good condition, so when the overwintered plants are relocated, they begin to explode.

### SUGGESTED USE:

- » A universal product for the nutritional supply of garden, balcony and ornamental plants.
- » Ideally, irrigate 2 liters of water using 1 cap nutrient solution.

Perfect for those who have blossoming and leafy plants and don't want to use multiple product variations. Thus, one product can benefit all plants.



## > FitoHorm Geranium

With the advent of summer, the nutrient requirements of plants change, especially those placed on the balcony or outdoors. The warmer the weather, the faster the plants grow, so they need more water and nutrients to grow and bloom. The most important nutrients are nitrogen, phosphorus and potassium. These macronutrients are needed in large quantities by plants. Smaller amounts of nutrients (micronutrients) are also essential for proper growth and flowering.

### SUGGESTED USE:

- » Recommended nutrient supply for geraniums, petunias and other flowering balcony and indoor plants.
- » For 2 liters of water, 1 cap nutrient solution is recommended.
- » Water once a week with FitoHorm.

As a result of the treatments, more flowers are formed, the shoot system is enriched and the plant fills its available space sooner.







## ➤ FitoHorm Leaf Ornamental Plant

It is a product specially developed for feeding ornamental foliage. It contains the essential nutrients needed for the balanced growth of our plants. With its use, the leaf plate expands nicely and becomes bright. FitoHorm Leaf Ornamental is also well suited for herbs, where its use results in rapid regeneration.

### SUGGESTED USE:

- » Recommended for nutrient supply of foliage balconies and leaf ornamental plants.
- » For 2 liters of water 1 cap nutrient solution is recommended.
- » Water every week from April to September and every 3 weeks in winter.

Treatments provide rich, balanced growth. It can be used to prevent bottom-up baldness and leaf fall, which often occurs in houseplants.

## ➤ FitoHorm Oleander

Oleander is a Mediterranean, sun-loving plant. As the spring progresses, the warmer the time, the greater the amount of sunlight and therefore the need for frequent irrigation. Continuous flowering is guaranteed only when the right nutrient levels are reached.

**FitoHorm Oleander** contains nutrients that are especially important for the plant. Its real advantage is that it contains an entire row of trace elements in addition to macronutrients. Macro elements are responsible for thicker rooting and shoot growth. Micronutrients are responsible for the formation of a healthy, green foliage and ensure long-lasting, vibrant color .

### SUGGESTED USE:

- » Recommended for all Mediterranean, tropical and subtropical ornamental plants, besides Oleanders
- » Leaf treatment: For 2 liters of water, irrigate weekly using 1 cap nutrient solution.
- » For soil treatment: use before planting in a volume of 0.1 liters / 100 m<sup>2</sup>, applied to the soil.



## > FitoHorm Garden

With the FitoHorm Garden we can replace trace elements that are not or difficult to absorb from the soil. Plants become greener, more resistant to various fungal infections, and more resistant to weather extremes. Helps to develop fruity fruits and vegetables. Without the replacement of essential micronutrients, the development of the plants stagnates, collapses and begins to die slowly.

### SUGGESTED USE:

- » It is recommended to use it 2-3 times during the growing season.
- » In the case of decayed woody plants, it is advisable to repeat the treatment every 2 weeks in order to achieve a curative effect.
- » Application rate: 5 liters / ha or a concentration of 1-1.5%.



## > FitoHorm Evergreen

It is recommended for nutrient replenishment of thorns, pine trees and other green ornamental garden or balcony plants as well as for refreshing or nourishing lawns. Thanks to its high iron and magnesium content, it stimulates chlorophyll production and directly makes the leaves green.

### SUGGESTED USE:

- » For foliar fertilization: sprayed on foliage in 1-2% concentration (1-2 dl / 10 l water).
- » For soil fertilization: apply 1 cap of nutrient solution to the soil for 2 liters of water (1 dl / 10 l of water).
- » For lawns: 0.5-1 ml / m<sup>2</sup>.
- » Use it outdoors from April to August, every 3-4 weeks.

**Special nutrient solution!** With regular use, **most fungal diseases affecting** evergreens can be eliminated. It helps to reduce the adverse effects of summer heat and intense irradiation. It gives the evergreens a very vivid, varietal color and allows strong vitality throughout the growing season.



## > FitoHorm Lawn

Creating a coherent, beautiful appearance, uniform color and constantly renewing stock is only possible with uniformly applied, diluted Fito-Horm fertilizer. Its ingredients ensure the smooth growth of the plants and stimulate the formation of green color bodies, thus giving the grass its color.

### SUGGESTED USE:

- » Application with a nutrient solution at a concentration of 0.01% or 100 ml FitoHorm Lawn per m<sup>2</sup>.
- » It is worth repeating with watering once or twice a month.
- » When spraying, in areas rich in nutrients, 100-160 ml / 10 liters of water should be added per 10 m<sup>2</sup>.
- » During the vegetation period, it is advisable to repeat the spraying every 14 days.



## > FitoHorm Complex Plus

It is recommended for the nutrition supply of garden, balcony and ornamental plants as well as vegetable plants.

FitoHorm Complex Plus, as its name implies, is a complex solid irrigation,, fertilizer that contains large amounts of the most important macro and micro elements. Due to its composition it can be applied to any indoor plant, garden or flowering ornamental plant, through both foliage and soil. It dissolves very quickly and thanks to its high nutrient content, it is a very effective and economical product that, in addition to preventing and curing nutrient deficiency, has a positive effect on flowering and improving the quality of the fruit.

### SUGGESTED USE

#### The most economical solution!

1 kg FitoHorm Complex Plus is enough to 1000 liters of water!

**AS FERTILIZER** sprayed on leaf in 0.2-0.5% concentration.

#### Applied as a nutrient solution to soil:

- » Ornamental plants: 10 g / 10 l water (1 dosing spoon)
- » Geranium: 20 g / 10 l water (2 dosing spoon)
- » Vegetables: 10-20 g / 10 l water (1-2 dosing spoon)

Do the nutrient dilution is weekly and always follow it with irrigation.



# ORGANIC FARMING



ORGANIC FARMING

# ORGANIC FARMING AND THE FITOHORM

Organic farming, as the farmers call it, is a carefully designed cultivation system where the use of synthetically produced chemicals and fertilizers are prohibited, while the use of natural active ingredients, minerals and physical plant care are necessary and recommended. The basic principle of organic farming is to continue cultivating farm plants and animals while making the most of the ecological potential of the area, while minimizing any interference with the local ecosystem and in no way damaging or polluting it. **The FitoHorm chelates** are completely natural. First of all, the conditions of the area, the soil characteristics, the climate, the available water sources, the natural vegetation cover (remnant) must be well known in order to use and protect our plants. Animals in the area can help a lot in plant protection and soil conservation.

Synthetic materials should not be used in cultivation for any purpose, even under "compulsion". Efforts should be made to reduce energy use, the use of various organic wastes and renewable sources, giving priority to locally available sources. Pay attention to the effects these have on our plants, eg. pentozan effect, zinc deficiency, as they can be prevented, there is no need to worry about it, because we can compensate with FitoHorm products. The cultivated plants must be selected in the light of the particularities of the area, and it is difficult to ensure a balanced development of the plants. In this situation, FitoHorm products can be applied with great efficiency and it will be impossible to prevent plant protection in a degraded stock.

**Organic products from FitoHorm help protect the crop and ensure quality products!**





FOR ORGANIC, FIELD AND HORTICULTURAL CULTURES

COMPOSITIONS OF PRODUCTS																			
MULTI-FUNCTIONAL FERTILIZERS IN SOLUTION (m/v %)				N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	MgO	SO <sub>3</sub>	CaO	Fe	Mn	Cu	Zn	B	Mo	Field dose	Horticultural dose (ml/10 l water)		
				%	%	%	%	%	%	%	%	%	%	%	%	%	%	l/ha	lofoliage treatment
1	FitoHorm Bio Grain			-	-	-	-	-	-	0.5	1	1.8	0.3	0.3	0.03	4-5	-	-	
2	FitoHorm Soya			-	-	-	-	-	-	0.4	0.5	0.5	1.5	0.5	0.3	2-3	-	-	
3	FitoHorm Grapes-Fruits			-	-	-	-	-	-	3.2	0.32	0.15	0.15	0.31	0.03	4-5	100-160	20	
4	MikroMax			-	-	-	-	-	-	3	1.32	0.15	0.23	0.26	0.07	2-3	60-80	10	
5	FitoHorm Garden			-	-	-	-	-	-	1.8	0.37	1.45	0.2	0.26	0.04	-	100-200	20	
MULTI-FUNCTIONIOL FERTILIZERS (m/v %)				N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	MgO	SO <sub>3</sub>	CaO	Fe	Mn	Cu	Zn	B	Mo	Field dose	Horticultural dose (ml/10 l water)		
				%	%	%	%	%	%	%	%	%	%	%	%	%	%	l/ha	lofoliage treatment
1	Polyboron 140			-	-	-	-	-	-	-	-	-	-	-	14	-	2-3	40-60	10
2	Polyboron Plus			-	-	-	-	-	-	-	-	0.15	0.15	12.5	0.03	2-3	40-60	10	
3	FitoHorm Turbo Zinc			-	-	-	-	-	-	-	-	-	10	-	-	2-3	80-160	20	
MONO-ELEMENT FERTILIZERS (m/v %)				Composition												Field dose	Horticultural dose (ml/10 l water)		
																l/ha	lofoliage treatment	Irrigation	
1	FitoHorm 10 B			Boron solution				B				2.5				3-5	100-200	10-50	
2	FitoHorm 40 Ca (nitrogen free)			Calcium solution				CaO				17				5-7	100-200	10-50	
3	FitoHorm 54 Mn			Manganese solution				Mn				4				3-5	100-200	10-50	
4	FitoHorm 55 Fe			Iron solution				Fe				4				3-5	100-200	10-20	
5	FitoHorm 63 Cu			Copper solution				Cu				4				4	100-200	10-50	
6	FitoHorm 65 Zn			Zinc solution				Zn				4				3-6	100-200	10-20	
Iron chelate(m/v %)				Iron content												field dose l/ha	horticultural dose (ml/10 l water)		
1	FitoFerr T-3 for soil treatment			3												50-100 ml/vine	50-100 ml/vine		
Plant conditioners				Composition												Field dose (l/ha) 5-10			
1	HERBAL			Multiphase, biologically superior organic materials.															



# *FitoHorm*<sup>®</sup>

...PLANT NATURALLY DESERVES IT.

## CHARGE THE ROOTS OF YOUR PLANTS WITH ENERGY **WITH FITOHORM TURBO START**



**FITOHORM TURBO START**

dose 3-5 liter/ha

### **THREE REASONS TO USE:**

It activates the plant's immune system and accelerates its metabolism

Stimulates the development of the primary root system

High content of phosphorus and zinc



# PRODUCTS





SUGGESTED USE:  
4-5 liter/ha

## > FitoHorm Grain

Multiple active compound formulation capable of providing a nutrient supply to cereals at any phenological phase. When composing meso and micronutrient content for those nutrients (S, Cu, Mn, N, Zn) have been emphasized, which the cereals need more during their development.

### THE BENEFITS OF USING IT:

- » Plant-specific, suitable micronutrient composition in ideal proportion
- » Provides a harmonious supply of nutrients,
- » Liquid, instant form (nutrients in real solution)
- » **One of the cornerstones of the Hungarian foliar fertilization, which still holds the leading role in the feeding of cereals.**



SUGGESTED USE:  
4-5 liter/ha

## > FitoHorm Bio Grain

FitoHorm Organic Grain contains trace amounts of essential micronutrients for cereals. The product contains only trace elements. The solution fertilizer has a modern chelator in addition to the micronutrients, which ensures fast and perfect absorption of the micronutrients through the leaf. It is recommended for any farmer who does not want to spend much on foliar fertilizers but wants to replace their micronutrients safely. Foliar fertilization provides targeted nutrient supply.

### THE BENEFITS OF USING IT:

- » We can effectively mitigate the effects of adverse weather conditions,
- » In the early phenological phase, the propensity to shrub enhances with adequate micronutrient replacement,
- » The use of autumn / early spring increases the number of fertile spicules
- » Organic farmers can make the most out of their crops,
- » Can be mixed and applied perfectly with UAN solutions.

## ➤ FitoHorm Corn Plus

A special foliar fertilizer specially formulated for corn! Corn's crop protection technology and development dynamics offer little potential for application. FitoHorm Corn Plus also contains the nitrogen needed for dynamic development, the sulfur needed for its utilization, the zinc and copper needed for differentiation of the ears. Iron and manganese provide the basis for dynamic development through stable, well-functioning photosynthesis. Boron contributes to the developmental processes that are essential for the development of floral organs of normal morphology.

### THE BENEFITS OF USING IT:

- » Contains all essential micronutrients for corn,
- » Promotes perfect ear differentiation,
- » Improves water management, florist production and keeping the stigmas wet,
- » Ensures good crop bonding.



SUGGESTED USE:  
**4-5 liter/ha**

## ➤ FitoHorm Soya

The product contains micronutrients necessary for development for soya, peas and beans. In the case of soya and peas, particular attention should be paid to the supply of P, K, Mg, S and trace elements. Excessive levels of nitrogen supply can reduce the formation of symbiotic bacterial root nodules. It is important to replace the nitrogen during the initial period until the symbiotic relationship is broken. The lack of molybdenum, the insufficient N-binding of the root tuber bacteria and the resulting N-deficiency symptoms in many cases obscure all other symptoms due to Mo deficiency.

### THE BENEFITS OF USING IT:

- » Contains elements essential for the symbiosis between legumes and root tuber bacteria,
- » Provides the nutrients needed to develop a strong shoot system,
- » When applied together with UAN solutions, it has a very good efficiency.



SUGGESTED USE:  
**2-3 liter/ha**





SUGGESTED USEt:  
4-5 liter/ha

## ➤ FitoHorm Oil crops

It is the key to the vitality and good condition of our oil crops, which, due to its complex composition, can be applied to all stages of the development of plants. Its use significantly improves the effect and effectiveness of the applied pesticides. Among the FITOHORM product family, FitoHorm Oil Crops is specifically designed to meet the nutrient requirements of oil crops (rape, sunflower).

### THE BENEFITS OF USING IT:

- » Plant-specific composition,
- » Its boron and sulfur content ensures proper binding,
- » The nutrients in the product enhance oil synthesis and oil recovery,
- » Can be applied together with plant protection works.



SUGGESTED USE:  
4-5 liter/ha

## ➤ FitoHorm Grapes-Fruits

It contains the ideal proportion and quantity of trace elements for grapes and fruits. The most frequently occurring micronutrient deficiencies can be prevented and remedied by continuous application in all standing cultures. FitoHorm Grapes-Fruits helps the development of vineyards and intensive shoot growth.

### THE BENEFITS OF USING IT:

- » It has all the essential micro-enzymes needed for a healthy fruit that are needed in the plantation,
- » Has a powerful iron content that can be absorbed the fastest,
- » Thanks to its high boron content, it improves flower fertilization, adherence and reduces the frequency of flower kicking,
- » Can be perfectly mixed with UAN solutions and enhanced
- » Can also be used in organic farming.

## > FitoHorm Vegetables

The special composition of the preparation brings our vegetable plants into shape. Its micronutrient content strongly stimulates the formation of tubers in the case of typical plants. When used with absorbent plant protection products, it facilitates their penetration into and within the plant. It strengthens the vigor of vegetables in particular. By using FitoHorm Vegetables we can provide leaf conditioning, balanced development and high quality.

### THE BENEFITS OF USING IT:

- » After application, it enhances the photosynthesis of the plant and the transport of assimilates, which results in a stronger root system,
- » The trace elements present in the product contribute to the intake of large amounts of nutrients from the soil,
- » This allows the treated plants to grow healthier and faster.



SUGGESTED USE:  
**4-5 liter/ha**

## > MAKROSOL

MAKROSOL is a foliar fertilizer with a favorable composition of macro- and micro-nutrients specifically designed for plant conditioning. By using this product it is possible to harmonize the nutrient supply and improve the condition of the crop. Nowadays, besides the supply of macronutrients, more and more attention is being paid to the supply of balancing microelements of plants, which is provided by MAKROSOL.

### THE BENEFITS OF USING IT:

- » The phosphorus contained in the product is an essential component of plant cells,
- » Potassium enhances crop safety, frost tolerance, disease resistance as activators of many enzymes,
- » Iron, copper, zinc and boron play a wide role, all of which are essential for the smooth functioning of plant life processes.



SUGGESTED USE:  
**4-5 liter/ha**



SUGGESTED DOSE:  
**2-3 liter/ha**

## > MikroMax

MikroMax is the "Béres drop" of plants, a "microelement bomb" that boosts a true immune system. In our newly developed product range we aimed exclusively at harmonic micronutrient supply (B, Cu, Fe, Mn, Mo, Zn), without the need for macronutrients (N, P, K). As its name implies, as much as possible in proportion to the plants.

### THE BENEFITS OF USING IT:

- » can be used in horticultural crops and ornamental crops for soil treatment, nutrient solution and foliar fertilization,
- » Can be used before or after planting.
- » Also authorized for organic farming,
- » Can be used in arable crops throughout the whole growing,
- » **The best choice on the Hungarian foliar fertilizer market.**



SUGGESTED DOSE:  
**for arable crops**  
**5-10 liter/ha**

## > FitoHorm Herbal

FitoHorm Herbal conditioner strengthens the root system and promotes the utilization of mineral salts and trace elements in the soil nutrients. It accelerates the uptake of nutrients, stimulates growth, thereby making the plant stronger and increasing its metabolism.

The plant makes good use of the uneven rainfall, HERBAL helps the vegetation through the drier periods. The foliage treated with HERBAL is more vigorous, greener, which is a prerequisite for further photosynthesis. HERBAL strengthens the immune system and makes the plant resistant to various weather conditions. As a result, the fortified plant is more resistant to strong sunlight and extreme conditions.

### THE BENEFITS OF USING IT:

- » Strengthening the resistance of plants,
- » Stimulates plant growth, chlorophyll formation and respiratory activity (more intensive photosynthesis),
- » Special so-called secondary defense functions (phytoalexins) activation,
- » Increases the function of the plant enhancer
- » Increases the biological activity of the soil,
- » Ensures vigorous growth of the root system.

## ➤ FitoHorm Turbo Start

The root is the mouth of the plants: the organ for the uptake of nutrients and water. It also transports and stores the soil, its flora and its fauna. The size and the health of the root have a decisive influence on the entire life of the plant. With its very high phosphorus ratio, the Turbo Start product gives a special boost to the initial root development, including thickening of the central axis of the root and increasing branching, which results in dynamic development a few days after treatment. Another important ingredient of the product is the high zinc content which significantly increases the length of the root hair, ie the absorption band. All the nitrogen and trace elements in the product help to uptake phosphorus and zinc and deliver them within the plant.

### THE BENEFITS OF USING IT:

- » Activates the plant's immune system and speeds up its metabolism,
- » Stimulates the development of the primary root system,
- » High content of phosphorus and zinc
- » When applied together with UAN solutions, it has a very good efficiency.



SUGGESTED DOSE:  
**3-5 liter/ha**

## ➤ FitoHorm Turbo Magnesium

FitoHorm Turbo Magnesium is a product with a special effect and excellent absorption by our crop plants. All this is due to its extraordinary purity of ingredients and careful formulation. Magnesium is one of the active ingredients can be applied to plants with unique efficiency.

### THE BENEFITS OF USING IT:

- » Increases the activity of photosynthesis,
- » Increases the metabolism of the plant, thereby helping to optimize its growth,
- » Greening power (responsible for the deep green color in the flora),
- » Enhances rooting, flower formation and healthy germ development within the seed.



SUGGESTED DOSE:  
**2-3 liter/ha**

**It is important that FitoHorm Turbo Magnesium is the first component in the tank mix and then add the other ingredients!**

### MAGNESIUM-DEMANDING CULTURES:

rape, sunflower, potato, melon, tobacco, grape, pepper, tomato, cucumber, cabbage.



SUGGESTED DOSE:  
**3-4 liter/ha**

## ➤ FitoHorm Turbo Makro

FitoHorm Turbo Makro is a liquid complex foliar fertilizer that is recommended for the treatment of developmental problems caused by extreme weather and other stress. The macronutrient composition in foliar fertilizers (18-18-18 NPK), by adding a special form of phosphorus, restarts slowed or stalled metabolic processes and activates the defense mechanism of plants.

### THE BENEFITS OF USING IT:

- » The harmonious composition improves the quality and quantity of the crop,
- » The special form of phosphorus results in cell wall thickening, which improves stem strength,
- » Starts rooting,
- » Rapid absorption through foliage,
- » Increases the utilization of most pesticides.

There is no need for dissolution, only dilution, so pH or hard water does not affect mixability.



SUGGESTED DOSE:  
**2-3 liter/ha**

## ➤ FitoHorm Turbo Phosphorus

It contains a unique form of phosphorus that is rapidly absorbed and transported by the plant and enhances the internal functioning of the cells. It "nourishes and protects" at the same time, as it is recommended in all cases where rapid and effective intervention is required to prevent crop loss or degradation. **Leaf fertilizer is excellent for boosting the plant's immune system**

### THE BENEFITS OF USING IT:

- » It helps the plants to grow at every stage of development,
- » Improves the nutritional value and coloration of the fruit,
- » It helps to produce better quality, tastier, more succulent, easy to transport and longer-lasting, well-stored fruits.

### PHOSPHORUS DEMANDING CULTURES:

rape, sunflower, cereals, onion, cabbage, carrot, celery.



## > Polyboron 140

One of the icons of Hungarian foliar fertilization, which has been preserved for many years thanks to its reliable, safe operation and its role. Polyboron 140 in Polyboron Complex stimulates the generative processes, pollen hose drive and development, enhances cell wall stability and is therefore essential for plant life.

### IMPORTANT TO KNOW THAT BORON AS NUTRITION:

- » Recording is most intensive at the beginning of vegetation,
- » Greatly improves winter resistance,
- » If absent, fertilization decreases and binding is impaired

Being an essential micronutrient, its presence is vital to all cultures, especially oil crops, grape and fruit, and some vegetables.

### BORON DEMANDING CULTURES:

rape, sunflower, sugar beet, apple, cherry, sour cherry, peach, apricot, cabbage.

## > Polyboron Plus

Thanks to its continuous development, **Polyboron Plus has become a symbol of renewable energy.** The foliar fertilizer contains a special complex of boron and all the trace elements (molybdenum, zinc and copper) needed for rapid incorporation. The effect of Polyboron Plus on flowering is enhanced and complex, applied during the period of development of the flower organs stimulates their differentialization, develops well-developed flower patterns.

### THE BENEFITS OF USING IT:

- » When applied before flowering, it has a very positive effect on pollen formation,
- » Improves pollen fertility,
- » The molybdenum in it keeps the stigma wet for a long time even under unfavorable conditions,
- » the copper and zinc in it significantly influence the formation and development of generative organs through enzymatic processes.



SUGGESTED DOSE:  
**2-3 liter/ha**



SUGGESTED DOSE:  
**3 liter/ha**



SUGGESTED DOSE:  
**2-3 liter/ha**

## ➤ FitoHorm Turbo Sulfur

It increases the resistance, physiological performance, development and yield of plants. Helps to develop excellent food parameters and feed quality. It stimulates the amount of vegetable oils formed in the aroma passages and their species specific content. **The proper means of true sulfur replacement through leaf.**

### THE BENEFITS OF USING IT:

- » It has an extra high sulfur content,
- » In addition to the quality of the crop, it also has a positive effect on quantity,
- » Increases the dry matter content of plants and reduces drought,
- » Enhance protein and oil production.

In the absence of sulfur, protein synthesis is disturbed and, in addition to stunted growth, the expansion of the leaf discs remains inhibited, the utilization of nitrogen also decreases.

### SULFUR DEMANDING CULTURES::

rape, sugar beet, sunflower, green peas, onion.

## ➤ FitoHorm Turbo Potassium



SUGGESTED DOSE:  
**2-3 liter / ha**

Our highest active ingredient (97% total) is the **"oasis" of plants**, containing 4% nitrogen, 36% potassium and 57% sulfur. This special nutrient ratio results in exceptional efficiency. FitoHorm Turbo Potassium Liquid Fertilizer Fertilizer is quickly and efficiently utilized through foliage. Potassium is a guarantee of the quantity and quality of the fruit.

### THE BENEFITS OF USING IT:

- » Enhance metabolic processes,
- » Helps the eye build up, carbohydrate accumulation in the eyes,
- » Improves the weight of a thousand grains and with it the yield increases,
- » Increase the quality, coloring and sugar content of the fruits,
- » Strongly improves resistance to cold and drought.

### POTASSIUM DEMANDING CULTURES:

cereals, corn, potatoes, sugar beets, sunflowers, grapes, melons, berries, legumes, celery, beets.

## ➤ FitoHorm Turbo Calcium

A new philosophy of the calcium fertilizer developed in the spirit of cooperation. It contains calcium, magnesium and potassium in the most favorable proportions for plants. The preparation and the nitrate content and formulation of the cations into the plant stimulates a faster integration.

### THE BENEFITS OF USING IT:

- » Early spring use can reduce spring frost damage in rape,
- » The use of this product to prevent longitudinal rupture of the stalk during intensive rape growth,,
- » Its components stabilize water balance, enhance photosynthesis,
- » Basic nutrient on the counter for vegetables / fruits

The composition of FitoHorm Turbo Calcium and the proportion of nutrients it contains allows for the most effective calcium intake.

### CALCIUM DEMANDING CULTURES:

apple, grape, tomato, cucumber, melon, cabbage, autumn coleseed.



SUGGESTED DOSE:  
**3-5 liter/ha**

## ➤ FitoHorm Turbo Zinc

The active ingredient of FitoHorm Turbo Zinc ensures normal growth of plants. If soil phosphorus is high, it reduces zinc inclusion. By using the proper formulation, we can ensure micro-replacement through the leaf. The zinc requirements of plants are generally minimal, but their use in certain crops is of paramount importance.

### THE BENEFITS OF USING IT:

- » Helps in the ear differentiation, rooting of the corn
- » In orchards, vines, contributes to the normal development of shoots and leaves,
- » Improves woodiness, reduces frost susceptibility and "winter branch necrosis",
- » Zinc regulates nitrogen metabolism,
- » The high active ingredient content of FitoHorm Turbo Zinc is the maximum that can be given to plants with Zn supplementation.

### ZINC DEMANDING CULTURES:

corn, soya, grapes, apricots, pears, cabbages.



SUGGESTED DOSE.  
**2-3 liter/ha**



SUGGESTED DOSE:  
**2-3 liter/ha**

## ➤ FitoHorm Turbo Copper

Plants take up copper in ionic or chelated form in complex form. Replacement of copper can be done entirely through leaf. For cereals, copper deficiency may occur due to inhibited transport processes. In the absence of copper, cell wall, the transport beams develop abnormally, causing plants to fall quickly (harvest loss). Thanks to the special and stable formulation of FitoHorm Turbo Copper, we have the possibility of very high copper replacement.

### THE BENEFITS OF USING IT:

- » It improves the drought tolerance of the plant,
- » Promotes the formation of bush knots, stimulates the ear differentiation
- » Protects chlorophyll from premature degradation, thus assimilation performance,
- » Improves photosynthesis and metabolism,
- » Very effective when mixed with UAN solutions.

### COPPER DEMANDING CULTURES:

cereals, apples, plums, apricots, citrus fruits.

## ➤ FitoHorm Turbo Nitrogen



SUGGESTED DOSE:  
**10-15 liter/ha**

The product is the **"energy drink" of our plants**. Thanks to the various forms of nitrogen, the plant is continuously supplied with nitrogen. After application, the absorption of nitrogen is guaranteed by the urea, which results in a gradual and steady supply of nutrients over several weeks. Its effectiveness is outstanding against solid head fertilizers applied in spring, in dry weather.

### THE BENEFITS OF USING IT:

- » Due to the complex form of urea-formaldehyde there is no risk of scorching the leaf,
- » Continuously nourishes the plant during its unfolding, so it does not cause chronic tissue stretching / thinning,
- » Is a liquid nitrogen fertilizer that gives our plants a chance in drought.

It also contains a special form of nitrogen including magnesium, sulfur and copper.

## > FitoHorm Turbo Manganese

Manganese, like magnesium, iron, and some heavy metals, is involved as an enzyme activator in plant metabolism. It plays an essential role in protein synthesis, the citric acid cycle, and photosynthesis. Strong dehydration of the soil can lead to dehydration of various manganese salts. Dehydration reduces the solubility of the compounds, resulting in the development of relative manganese deficiency. In addition to the manganese content of the composition, it also contains a significant amount of highly absorbable molybdenum, which has a beneficial effect on nitrogen metabolism.

### ADVANTAGES OF USING:

- » After application, it strengthens the photosynthesis of the plant and the transport of assimilates,
- » microelements in the product contribute to the incorporation of large amounts of nutrients from the soil, so
- » treated plants develop healthier and faster,
- » using this product improves flower and crop formation.

### MANGANESE DEMANDING CULTURES:

cereal, rape, soy, sugar beet.



Suggested use:  
**2-3 liters/ha**

## > FitoHorm MagMAX

In the composition of the product, we used microelements that such as **Zinc (Zn)**, which helps primary rooting, **Boron (B)** and **Manganese (Mn)**, which play a key role in carbohydrate metabolism, and **Molybdenum (Mo)**, which helps in the uptake and incorporation of Nitrogen and Boron. The applied dose accelerates the metabolism of the seedling, promotes the incorporation of nutrients from the seed and soil. As a result, root mass and stress tolerance increase.

### ADVANTAGES OF USING:

- » It mixes well with other dressings,, increases their adhesion, efficiency,
- » the outstandingly high coloring effect of the product,
- » provides a continuous supply of nutrients in the initial development, even on compacted, airless, alkaline soils,
- » the homogeneity of the hatched plant increases.



Suggested use:  
**4-5 liters/ton**



# Fito Horm®

..plant naturally deserves it..

## SOLUTION FROM THE EXPERT OF THE FOLIAGE FERTILIZER **FITOHORM TURBO MANGANESE**



**FITOHORM TURBO MANGANESE**

dose: 2-3 liter/ha

### THREE REASONS TO USE:

It enhances the photosynthesis of the plant

It improves flower and fruit formation

Quality content

# SERVICE





# FITOSERVICE

## THE LEAF ANALYSIS!

In the '80s, the spread of FitoHorm mono foliar fertilizers was helped by nutrition consultancy. One of the pillars of this system was leaf analysis. Following the change of regime, the structure of farmers was completely transformed, so the nutrient supply through the foliage was also neglected. It took many years for farmers to re-learn how to target macronutrients and micronutrients. And over the past decade, the optimal application of different types of fertilizers has been learned. The correct use of basic, starter and head fertilizers has been replaced.

### OPINIONS ABOUT THE FOLIAGE MICROELEMENT REPLACEMENT

- » They do not believe in the efficiency of foliar fertilizers.
- » Generalize all kinds of liquid preparations for use in leaves.

#### Solution:

- ✓ The different formulations and their effectiveness (bacterial fertilizers, biostimulants, plant conditioners, foliar fertilizers, etc.) must be handled and known.
- ✓ The correct application of foliar fertilizers must be learned.

### FITOSERVICE – THE RENEWABLE LEAF ANALYSIS!

A system that includes leaf analysis, consulting and a complete offer. A suite of services based on leaf analysis, where, after personalized research, our consultants use a program to provide a nutrient supply offer through the leaf.

#### BENEFITS

- ✓ Comprehensive service in the field, plantations and horticulture
- ✓ More than 50 types of cultivated plants nutrient testing is provided
- ✓ National coverage.
- ✓ Our consultants are professionals.
- ✓ Complete, controlled content complex foliar fertilizer supply.
- ✓ Study accepted in AKG program.



Test data from consecutive years provide an important basis for comparison and significantly increase the reliability of leaf analysis.

Hundreds of plant studies carried out in recent years have in many cases yielded surprising results. Although leaf analysis can be considered as a snapshot of the complex development process of plants, evaluating the results of samples together with soil test results and nutrient supply and agrotechnical interventions already made, very valuable relationships have been found, which are the correct conclusions. After deduction, they have contributed significantly to improving either the qualitative or the quantitative parameters of a given culture. Leaf analysis can thus be useful not only in plants showing symptoms of deficiency, but in fact wherever we want to grow healthier, more resistant plants, or produce higher yields and better quality crops.

FITOSERVICE offers accredited examination of the most important macro and micro elements of leaf samples: N, P, K, Ca, Mg, Cu, Zn, Mn, Fe, S and B

The value of leaf analysis data is highly dependent on correct sampling, method and time of sampling. Consult our consultants for the most accurate information.





## OUR CONSULTANTS



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